

HEALTH IS WEALTH.

THE FAMILY

HEALTH 1878 ANNUAL

Containing, in addition to the usual Calendars and Astronomical Calculations,

Sanitary Hints for Each Month,

TOGETHER WITH

Invaluable information on a great variety of topics
pertaining to the care of the health
and other useful subjects.

The Code of Health.

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1878

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E AIR.
OD.
WATER.
CLOTHING.
EXERCISE.

OBTAIN ADEQUATE REST.
SECURE SUITABLE RECREATION.
KEEP CLEAN.
CONTROL THE PASSIONS.
PRESERVE CORRECT ATTITUDES

PUBLISHED AT

OFFICE OF THE HEALTH REFORMER,

BATTLE CREEK, MICHIGAN.

1878.

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1878.

ESTABLISHED 1855.

1878.

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HISTORICAL.

THE *Review and Herald* Publishing House was established in Battle Creek, Mich., in November, 1855, occupying a small two-story wooden building which had been erected for the purpose. March 7, 1861, an Act of the Legislature of Michigan for the incorporation of associations for publishing purposes was secured; and under this Act a legally-incorporated Association, under the name of The Seventh-day Adventist Publishing Association, was organized in Battle Creek, May 3, 1861. A large two-story brick building was immediately erected for its use, in the form of a Greek cross, the main portion being 26x66 feet, the transverse section 26x44. In 1871, a second building of the same size and form as the first was erected; and in 1873 a third building in all respects like the other two, was erected to accommodate the necessities of the increasing business. These are located opposite the public square, at the corner of Main and Washington streets. In these buildings we have an aggregate of thirteen thousand one hundred and four square feet of floor space which is occupied in the various departments of printing and book-binding.

The Association has published, to the present time, over two hundred million pages of books and pamphlets. It has an uncumbered capital stock of over one hundred thousand dollars; and, during the year ending Sept. 15, 1877, when the last annual meeting of the Association was held, it transacted business to the amount of one hundred and eighty-five thousand, one hundred and two dollars and sixty-seven cents. (\$185,102.67.) Of this, eleven thousand two hundred and eighteen dollars and thirteen cents (\$11,218.13) were for job work.

To meet this demand it has been the object of the Association to provide itself with the best material and the most approved machinery. Four power presses are now in constant operation and others are soon to be added. A full complement of book-binding machinery has just been put in, including ruling, sawing, backing and embossing machines. A twenty horse-power boiler and engine runs the printing and binding machinery.

From this little sketch of our history and present condition, the reader will see that we have the best facilities for doing all classes of work in our line, such as every variety of printing, both plain and ornamental, paper ruling, blank book manufacturing, and all kinds of book-binding. We guarantee first class work, reasonable prices and entire satisfaction.

Those desiring work done are invited to call and examine specimens and prices. Estimates will be furnished free, and orders by mail will receive prompt attention.

Address,

REVIEW & HERALD, Battle Creek, Mich.

Printed at one impression at the REVIEW & HERALD Job Office.

THE FAMILY

HEALTH ANNUAL.

1878.

Npresenting to the public this, the Fourth yearly Edition of the FAMILY HEALTH ANNUAL, the publishers feel themselves called upon to express their sincere thanks for the generous support which has made the enterprise thus far so great a success. The expectations of the most sanguine of its supporters have been more than realized. The three editions which have preceded this, met with so ready a sale that more than 200,000 copies were disposed of within a few weeks of the date of publication. Each year there has been an increasing demand for the ANNUAL, which is ample evidence of a growing popular appreciation of the value of a calendar which is wholly free from the vulgarity and smut which befoul the pages of nearly all of the almanacs of the present day.

Last year the demand for the ANNUAL upon the Pacific Coast was so great that a large edition was published at Oakland, Cal., at the office of the "Pacific Press." This year a double set of plates has been made, one set being forwarded to the Pacific Coast for the simultaneous publication of an edition there, to accommodate our numerous patrons in California, Oregon, Nevada, and Washington Territory.

Our old patrons will doubtless be pleased to note several improvements in the present edition, which, it is hoped, will make it still more acceptable to the public than its predecessors have been. The change in the name has been made to meet the wishes of quite a number of our patrons for the sake of relieving the publication of the odium which justly attaches to the numerous almanacs which flood the land in the interest of quack-medicine venders and other abusers of public confidence.

The main object of the publication, as heretofore, has been to inculcate true principles relating to Health and Temperance, and thus to serve as a useful auxiliary to the cause of reform in those directions; and it is issued with the hope that those to whose philanthropic efforts its eminent success has been heretofore chiefly due, will still deem it worthy of their patronage, and will heartily co-operate in its circulation as they have done in previous years.

1st MONTH.

JANUARY, 1878.

31 DAYS.

MOON'S PHASES.		BOSTON.		NEW YORK.	WASH'TON.	CHICAGO.
	D.	H. M.		H. M.	H. M.	H. M.
New Moon.....	3	9 19 morn.		9 7 morn.	8 55 morn.	8 13 morn.
First Quarter.....	11	2 3 eve.		1 51 eve.	1 39 eve.	0 57 eve.
Full Moon.....	18	7 27 eve.		7 15 eve.	7 3 eve.	6 21 eve.
Third Quarter.....	25	11 6 morn.		10 54 morn.	10 42 morn.	10 0 morn.

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa, & Oregon.				CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind., & Ill.				CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky, Missouri, & Cal.			
				SUN rises	SUN sets.	MOON rises.	H. W. Bost'n	SUN rises	SUN sets.	MOON rises.	H. W. N. Y.	SUN rises	SUN sets.	MOON rises.	
1	1	Tu	H. M. S.	H.M.	H.M.	H. M.	H. M.	H.M.	H.M.	H. M.	H. M.	H.M.	H.M.	H. M.	
2	2	W	12 3 58	7 30	4 38	6 4	10 14	7 25	4 44	5 58	7 0	7 19	4 49	5 50	
3	3	Th	12 4 27	7 30	4 39	7 5	11 9	7 25	4 44	6 58	7 55	7 19	4 50	6 51	
4	4	Fr	12 4 54	7 30	4 40	sets.	11 57	7 25	4 45	sets.	8 43	7 19	4 51	sets.	
5	5	Sa	12 5 22	7 30	4 41	5 38	morn	7 25	4 46	5 44	9 24	7 19	4 51	5 50	
6	6	Sa	12 5 49	7 30	4 42	6 43	0 38	7 25	4 47	6 48	9 58	7 19	4 52	6 53	
7	7	Mo	12 6 15	7 30	4 43	7 46	1 12	7 25	4 48	7 50	10 35	7 19	4 53	7 53	
8	8	Tu	12 6 41	7 30	4 44	8 48	1 49	7 25	4 49	8 50	11 11	7 19	4 54	8 53	
9	9	W	12 7 7	7 29	4 45	9 49	2 25	7 24	4 50	9 50	11 46	7 19	4 55	9 50	
10	10	Th	12 7 32	7 29	4 46	10 50	3 0	7 24	4 51	10 49	morn	7 19	4 56	10 49	
11	11	Fr	12 7 56	7 29	4 47	11 51	3 37	7 24	4 52	11 50	0 23	7 19	4 57	11 50	
12	12	Sa	12 8 20	7 29	4 48	morn	4 18	7 24	4 53	morn	1 4	7 19	4 58	morn	
13	13	Sa	12 8 43	7 28	4 49	0 55	5 0	7 23	4 54	0 52	1 48	7 18	4 59	0 49	
14	14	Mo	12 9 6	7 28	4 50	2 2	5 56	7 23	4 55	1 57	2 42	7 18	5 0	1 54	
15	15	Tu	12 9 28	7 28	4 52	3 12	6 58	7 23	4 56	3 7	3 44	7 18	5 1	3 1	
16	16	W	12 9 49	7 27	4 53	4 24	8 0	7 22	4 57	4 17	4 46	7 17	5 2	4 11	
17	17	Th	12 10 9	7 27	4 54	5 34	9 7	7 22	4 59	5 26	5 53	7 17	5 3	5 19	
18	18	Fr	12 10 29	7 26	4 55	6 38	10 13	7 21	5 0	6 28	6 59	7 17	5 4	6 22	
19	19	Sa	12 10 48	7 25	4 56	rises.	11 15	7 21	5 1	rises.	8 1	7 16	5 6	rises.	
20	20	Sa	12 11 6	7 25	4 58	5 49	ev.	7 20	5 2	5 54	8 53	7 16	5 7	5 59	
21	21	Mo	12 11 24	7 24	4 59	7 12	0 50	7 20	5 3	7 13	9 36	7 15	5 8	7 16	
22	22	Tu	12 11 41	7 23	5 0	8 31	1 34	7 19	5 4	8 30	10 20	7 15	5 9	8 32	
23	23	W	12 11 57	7 23	5 1	9 45	2 17	7 19	5 6	9 45	11 3	7 14	5 10	9 45	
24	24	Th	12 12 12	7 22	5 3	11 1	3 2	7 18	5 7	10 59	11 48	7 13	5 11	10 58	
25	25	Fr	12 12 26	7 21	5 4	morn	3 49	7 17	5 8	morn	ev.	7 13	5 12	morn	
26	26	Sa	12 12 40	7 20	5 5	0 17	4 41	7 16	5 9	0 14	1 27	7 12	5 13	0 11	
27	27	Sa	12 12 53	7 20	5 6	1 32	5 43	7 15	5 10	1 27	2 29	7 11	5 15	1 23	
28	28	Mo	12 13 5	7 19	5 8	2 46	6 49	7 15	5 12	2 41	3 35	7 11	5 16	2 35	
29	29	Tu	12 13 17	7 18	5 9	3 57	7 55	7 14	5 13	3 50	4 41	7 10	5 17	3 43	
30	30	W	12 13 27	7 17	5 10	5 0	8 58	7 13	5 14	4 52	5 44	7 9	5 18	4 44	
31	31	Th	12 13 37	7 16	5 11	5 53	9 57	7 12	5 15	5 46	6 43	7 8	5 19	5 38	
			12 13 46	7 15	5 13	6 36	10 50	7 11	5 17	6 29	7 36	7 7	5 20	6 22	

Eclipses.—An eclipse of the sun is caused by the passage of the moon between that luminary and the earth, thus obscuring its rays during the continuance of the eclipse. If the moon happens to pass across the center of the sun's disc, the eclipse will be *total* if the earth is near the sun, or *annular* if at a greater distance. In an annular eclipse the sun's rays are not wholly obscured, a ring of the luminous disc appearing about the dark body of the moon.

In the year 1878 there will be four eclipses, two of the sun and two of the moon. These phenomena will occur as follows:—

1. An annular eclipse of the sun, February 2, invisible in the northern hemisphere, but visible in Australia and around the South Pole.

2. A partial eclipse of the moon, February 17, partly visible in the United States, lasting three hours. The eclipse occurs in the morning, beginning at Washington, D. C.,

Damp Rooms.

IN damp houses lurk the causes of many grave diseases. Many a valuable life has owed its extinguishment to a damp bedroom.

In the Southern States, and in California, where the winter is the "wet season," this portion of the year is that in which dampness is generally prevalent. In the parlor and the "spare bedroom" the dampness sometimes becomes so great that it condenses in large drops upon the ceiling and walls. Mold frequently makes its appearance, adding to the chilling dampness another danger, that of germ poisoning. Vapors laden with organic matter ascend from the kitchen—arising from cooking vegetables—and, dispersing themselves through the dwelling, condense upon the cold walls of unwarmed rooms. Soon, decomposition of the organic matter begins, and poisonous germs and gases are developed. Colds, croup, diphtheria, catarrh, consumption, rheumatism, neuralgia, goitre, cerebrospinal meningitis, and numerous other diseases, originate in damp dwelling rooms.

During the damp season, which includes, in most localities, the autumn, winter, and spring months, every occupied room should be warmed and aired daily. When possible, every room should also be daily sunned. When there can be no stove in a room, it may be warmed from an adjoining room; if a sleeping room, the bed clothing should be daily carried to the fire to be warmed and aired. This should be done in the afternoon, on damp days, so that the sheets may not become damp by absorption of moisture before the bed is occupied at night. When this plan is inconvenient or inexpedient, the room and bedding may be easily dried by means of a small gas or kerosene-oil stove, several very excellent patterns of which are now manufactured. A man could scarcely suffer greater abuse at the hands of a friend than to be put into a damp, musty spare bed, in a damp, moldy, unsunned, unventilated spare bedroom.

SANITARY HINTS FOR JANUARY.

IN the large cities the close, damp, and dirty "rookeries" which harbor the "great unwashed," furnish fruitful breeding places for small-pox, measles, scarlatina, and other contagious diseases, during this month and the preceding. The best preventive against these potent causes of death is scrupulous attention to the dietary, and to all of the laws of health. Those who wish to be exempt from danger from the causes mentioned should abstain entirely from the use of stimulants and all stimulating and irritating foods and

drinks; keep the skin clean and active by frequent bathing; keep the bowels regular by exercise and proper diet; keep their apartments in a sanitary condition by free ventilation and daily sunning.

—A Quaker riding in a carriage with a fashionable lady who wore a profusion of jewelry, heard her complain of the cold. Shivering in her lace and jewels she exclaimed, "What shall I do to get warm?" "Really I don't know," replied the Quaker solemnly, "unless thee should put on another breastpin!"

2d MONTH. FEBRUARY, 1878. 28 DAYS.

MOON'S PHASES.		BOSTON.		NEW YORK.	WASH'TON.	CHICAGO.
	D.	H. M.		H. M.	H. M.	H. M.
New Moon.....	2	3 33 morn.		3 21 morn.	3 9 morn.	2 27 morn.
First Quarter.....	10	8 33 morn.		8 21 morn.	8 9 morn.	7 27 morn.
Full Moon.....	17	6 33 morn.		6 21 morn.	6 9 morn.	5 27 morn.
Third Quarter.....	23	10 29 eve.		10 17 eve.	10 5 eve.	9 23 eve.

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa, & Oregon.				CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind., & Ill.				CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky, Missouri, & Cal.			
				SUN rises	SUN sets.	MOON rises.	H. W. Bost'n	SUN rises	SUN sets.	MOON rises.	H. W. N. Y.	SUN rises	SUN sets.	MOON rises.	
				H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
32	1	Fr		12 13 54	7 14 5 14	7 9	11 34	7 10 5 18	7 3	8 20	7 6 5 22	6 58			
33	2	Sa		12 14 1	7 13 5 15	sets.	morn	7 9 5 19	sets.	9 1	7 5 5 23	sets.			
34	3	S		12 14 8	7 12 5 17	6 40	0 15	7 8 5 20	6 40	9 29	7 5 5 24	6 43			
35	4	Mo		12 14 13	7 10 5 18	7 38	0 43	7 7 5 21	7 40	10 0	7 4 5 25	7 44			
36	5	Tu		12 14 18	7 9 5 19	8 39	1 14	7 6 5 23	8 41	10 32	7 3 5 26	8 42			
37	6	W		12 14 22	7 8 5 21	9 40	1 46	7 5 5 24	9 39	11 6	7 2 5 27	9 38			
38	7	Th		12 14 25	7 7 5 22	10 43	2 20	7 4 5 25	10 40	11 43	7 0 5 28	10 38			
39	8	Fr		12 14 28	7 6 5 23	11 47	2 57	7 3 5 26	11 43	morn	6 59 5 30	11 40			
40	9	Sa		12 14 29	7 5 5 25	morn	3 37	7 1 5 28	morn	0 23	6 58 5 31	morn			
41	10	S		12 14 30	7 3 5 26	0 55	4 24	7 0 5 29	0 49	1 10	6 57 5 32	0 45			
42	11	Mo		12 14 30	7 2 5 27	2 4	5 20	6 59 5 30	1 58	2 6	6 56 5 33	1 52			
43	12	Tu		12 14 29	7 1 5 28	3 12	6 27	6 58 5 31	3 6	3 13	6 55 5 34	2 59			
44	13	W		12 14 27	6 59 5 30	4 17	7 38	6 57 5 32	4 10	4 24	6 54 5 35	4 3			
45	14	Th		12 14 25	6 53 5 31	5 18	8 48	6 55 5 34	5 6	5 34	6 53 5 36	5 0			
46	15	Fr		12 14 22	6 56 5 32	5 59	9 54	6 54 5 35	5 52	6 40	6 51 5 37	5 47			
47	16	Sa		12 14 18	6 55 5 33	6 35	10 55	6 53 5 36	6 31	7 41	6 50 5 39	6 27			
48	17	S		12 14 14	6 54 5 35	rises.	11 46	6 51 5 37	rises.	8 32	6 49 5 40	rises.			
49	18	Mo		12 14 8	6 52 5 36	7 18	ev. 29	6 50 5 38	7 20	9 15	6 47 5 41	7 21			
50	19	Tu		12 14 2	6 51 5 37	8 38	1 7	6 48 5 39	8 37	9 53	6 46 5 42	8 37			
51	20	W		12 13 56	6 49 5 39	9 57	1 51	6 47 5 41	9 55	10 37	6 45 5 43	9 53			
52	21	Th		12 13 49	6 48 5 40	11 16	2 36	6 46 5 42	11 11	11 22	6 44 5 44	11 8			
53	22	Fr		12 13 41	6 46 5 41	morn	3 25	6 44 5 43	morn	ev. 11	6 42 5 45	morn			
54	23	Sa		12 13 32	6 45 5 42	0 33	4 21	6 43 5 44	0 28	1 7	6 41 5 46	0 23			
55	24	S		12 13 23	6 43 5 44	1 47	5 23	6 41 5 45	1 40	2 9	6 40 5 47	1 34			
56	25	Mo		12 13 14	6 42 5 45	2 53	6 33	6 40 5 46	2 46	3 19	6 38 5 48	2 39			
57	26	Tu		12 13 3	6 40 5 46	3 49	7 39	6 38 5 48	3 43	4 25	6 37 5 50	3 36			
58	27	W		12 12 53	6 39 5 47	4 35	8 38	6 37 5 49	4 28	5 24	6 35 5 51	4 22			
59	28	Th		12 12 42	6 37 5 49	5 11	9 32	6 35 5 50	5 5	6 18	6 34 5 52	5 0			

at 4:34 A. M.; at New York City, at 4:47 A. M., and at Chicago, at 3:52 A. M.

3. A total eclipse of the sun, July 29, generally visible in the United States as a partial eclipse. The eclipse is total in Alaska, at Long's Peak, near Denver, Col., at the Gulf of Mexico, near the border between Louisiana and Texas, and at Havana, Cuba. The eclipse lasts about two hours, and begins at the times mentioned at the following cities: Washington, 4:36 P. M.; New York City, 4:47 P. M.; Chicago, 3:42 P. M.; New

Orleans, 3:50 P. M.; Galveston, Texas, 3:29 P. M.

4. A partial eclipse of the moon, August 12, partly visible in the United States, beginning at Washington, D. C., at 5:34 P. M., and at Chicago 42 minutes earlier.

Earth's Inhabitants.—According to the most recent statistics, the inhabitants of the earth number 1,423,917,000, or 28 persons to every square mile of surface.

Cultivating Dyspepsia.

THE majority of people are obstinately unwilling to listen to any warning respecting the danger attending unhealthful dietetic habits until their stomachs are almost hopelessly diseased. They go on with their reckless eating and drinking, day after day, always insisting that they are receiving no injury, until they suddenly awake to the fact that they are fully in the clutches of that hydra-headed monster, dyspepsia.

King James I., of England, said that if he were called upon to provide a dinner for Satan, his bill of fare should consist of a roast pig stuffed with tobacco. From the way the majority of American people treat their stomachs, it might reasonably be supposed that they were quite as willing to destroy the health of their digestive organs as King James was to give the devil a fit of indigestion.

There are scores of ways in which dyspepsia is cultivated. It flourishes around the sideboards of the rich, in the dining-rooms of hotels and restaurants, and wherever any of the laws of health are violated. If dyspepsia is a national disease in this country, it is because especial pains is taken to cultivate it here. Of all the bad practices of Americans, none need reforming more than their dietetic habits; and yet so great is the general apathy upon the subject that it is next to impossible to interest any one in the matter with the exception of an occasional invalid who has used his stomach for a general depository of all sorts of regular and irregular drugs, quack nostrums, and patent medicines, in addition to innumerable dietetic abominations, until it refuses longer to perform the functions of a garbage box, and demands more decent usage. When people learn to eat and drink hygienically because it is right and in harmony with nature's laws, dyspepsia will become as obsolete as the fossil vegetation of the carboniferous period.

SANITARY HINTS FOR FEBRUARY.

DURING this month pneumonia continues frequent, together with croup and diphtheria. The liability to these diseases is greatly increased by the general prevalence of colds produced by frequent thaws, which make the atmosphere damp and chilly, and thus disturb the circulation. Gross habits of living render these diseases highly dangerous, and often fatal.

Farmers who store their fruits and vegetables in the house cellar should make a thorough inspection of their barrels and bins, as by this time, unless the cellar is a *very* cold one, there

will be a very considerable amount of decayed products, which will require removal.

—A quack medicine vender, being overtaken on the road by a peddler, was thus addressed: "Hallo! What do you carry?" "Drugs and medicines," was the reply. "Good! you may go ahead; I carry gravestones."

—Dobbs was rather hard on the doctors when he said that he would have died of yellow fever if it had not been for one thing—the doctor gave him up.

Joy and temperance and repose
Slam the door on the doctor's nose.

—Longfellow.

3d MONTH.

MARCH, 1878.

31 DAYS.

MOON'S PHASES.				BOSTON.	NEW YORK.	WASH'TON.	CHICAGO.
			D.	H. M.	H. M.	H. M.	H. M.
New Moon.....	3		3	10 33 eve.	10 21 eve.	10 9 eve.	9 27 eve.
First Quarter.....	11		11	11 17 eve.	11 5 eve.	10 53 eve.	10 11 eve.
Full Moon.....	18		18	4 23 eve.	4 11 eve.	3 59 eve.	3 17 eve.
Third Quarter.....	25		25	0 6 eve.	11 54 morn.	11 42 morn.	11 0 morn.

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa, & Oregon.					CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind., & Ill.				CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky, Missouri, & Cal.		
				SUN rises	SUN sets.	MOON rises.	H. W. Bost'n		SUN rises	SUN sets.	MOON rises.	H. W. N. Y.	SUN rises	SUN sets.	MOON rises.
				H. M.	H. M.	H. M.	H. M.		H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
60	1	Fr	12	12 30	6 35	5 50	5 39	10 21	6 34	5 51	5 35	7 7	6 32	5 53	5 30
61	2	Sa	12	12 18	6 34	5 51	6 3	11 3	6 32	5 52	6 0	7 49	6 31	5 54	5 56
62	3	S	12	12 5	6 32	5 52	sets.	11 40	6 31	5 53	sets.	8 26	6 29	5 55	sets.
63	4	Mo	12	11 52	6 30	5 53	6 32	morn	6 29	5 55	6 32	8 57	6 28	5 56	6 33
64	5	Tu	12	11 38	6 29	5 55	7 32	0 11	6 28	5 56	7 31	9 27	6 26	5 57	7 31
65	6	W	12	11 24	6 27	5 56	8 33	0 41	6 26	5 57	8 32	9 58	6 25	5 58	8 30
66	7	Th	12	11 10	6 25	5 57	9 37	1 12	6 25	5 58	9 34	10 32	6 24	5 59	9 31
67	8	Fr	12	10 55	6 24	5 58	10 43	1 46	6 23	5 59	10 39	11 12	6 22	6 0	10 35
68	9	Sa	12	10 39	6 22	5 59	11 50	2 26	6 21	6 0	11 45	11 54	6 20	6 1	11 40
69	10	S	12	10 24	6 20	6 1	morn	3 8	6 20	6 1	morn	morn	6 19	6 2	morn
70	11	Mo	12	10 8	6 19	6 2	0 57	3 59	6 18	6 2	0 52	0 45	6 17	6 3	0 45
71	12	Tu	12	9 51	6 17	6 3	2 3	4 58	6 16	6 3	1 56	1 44	6 16	6 4	1 49
72	13	W	12	9 35	6 15	6 4	3 0	6 8	6 15	6 5	2 53	2 54	6 15	6 5	2 47
73	14	Th	12	9 18	6 14	6 5	3 48	7 21	6 13	6 6	3 41	4 7	6 13	6 6	3 37
74	15	Fr	12	9 1	6 12	6 6	4 29	8 27	6 11	6 7	4 24	5 13	6 11	6 7	4 19
75	16	Sa	12	8 43	6 10	6 7	5 2	9 30	6 10	6 8	4 58	6 16	6 10	6 8	4 55
76	17	S	12	8 26	6 8	6 9	5 30	10 26	6 8	6 9	5 28	7 12	6 8	6 9	5 26
77	18	Mo	12	8 8	6 7	6 10	rises.	11 18	6 6	6 10	rises.	8 4	6 6	6 10	rises.
78	19	Tu	12	7 50	6 5	6 11	7 27	ev. 2	6 5	6 11	7 25	8 48	6 5	6 11	7 22
79	20	W	12	7 32	6 3	6 12	8 48	0 42	6 3	6 12	8 45	9 28	6 3	6 12	8 43
80	21	Th	12	7 14	6 1	6 13	10 8	1 26	6 1	6 13	10 5	10 12	6 2	6 13	10 1
81	22	Fr	12	6 56	6 0	6 14	11 28	2 14	6 0	6 14	11 23	11 0	6 0	6 14	11 17
82	23	Sa	12	6 37	5 58	6 15	morn	3 6	5 58	6 15	morn	11 52	5 59	6 15	morn
83	24	S	12	6 19	5 56	6 17	0 40	4 3	5 57	6 16	0 34	ev. 49	5 57	6 16	0 27
84	25	Mo	12	6 0	5 54	6 18	1 43	5 6	5 55	6 17	1 36	1 52	5 55	6 17	1 29
85	26	Tu	12	5 41	5 53	6 19	2 33	6 10	5 53	6 18	2 26	2 56	5 54	6 18	2 19
86	27	W	12	5 24	5 51	6 20	3 12	7 13	5 52	6 19	3 6	3 59	5 52	6 19	3 0
87	28	Th	12	5 5	5 49	6 21	3 43	8 7	5 50	6 20	3 38	4 53	5 51	6 20	3 33
88	29	Fr	12	4 47	5 47	6 22	4 8	8 55	5 48	6 21	4 4	5 41	5 49	6 21	4 1
89	30	Sa	12	4 28	5 46	6 23	4 29	9 40	5 47	6 22	4 26	6 26	5 48	6 22	4 24
90	31	S	12	4 10	5 44	6 25	4 48	10 22	5 45	6 24	4 47	7 8	5 46	6 23	4 46

Transit of Mercury.—A transit is the passage of an inferior planet between the earth and the sun, when the body of the planet is seen to move across the sun's disc. Transits are occurrences of great interest to astronomers, as they afford especially favorable opportunities for many astronomical observations. Probably no celestial phenomenon was ever observed with such universal and intense interest, and with such elaborate and expen-

sive preparations as was the transit of Venus two years ago. A large measure of the same interest attaches to the transit of Mercury which occurs this year, May 6, and is visible in this country. It begins at Washington, 10:04 A. M.; at New York City, 10:17 A. M.; at Chicago, 9:22 A. M.; at New Orleans, 9:12 A. M.

Those who wish to observe the eclipse should provide themselves with smoked or colored glasses in readiness.

Animal Food.

ANIMAL food contains no nutrient which is not found in a much better state in numerous fruits, grains, and other vegetable productions. Eating flesh is really eating vegetables at second-hand and in a deteriorated condition, since all animals that are used as food subsist on vegetable productions. It is a well-known fact that the flesh of herbivorous animals—as the ox and sheep—which is the most wholesome kind of animal food, becomes very repulsive to the taste and wholly unfit for food, when those animals exchange their natural aliment for flesh. This fact alone is strong evidence that flesh diet produces changes in the system which are injurious to it. If animal food will so deteriorate the tissues of a sheep as to make its flesh distasteful and obnoxious, why will not the same diet produce the same damaging effects upon human tissues? Here is a point for meat-eaters to think of.

Cheating Nature.—Thousands of people are daily violating laws of nature with which they are perfectly familiar, under the delusion that they will in some way succeed in escaping the penalty which is attached to all natural laws. We are very prone to consider ourselves entirely different from everybody else, and to suppose that we may commit with impunity the same infringements upon nature's laws for which we continually see our neighbors suffering severe penalties.

The sooner we learn that we are wonderfully like the rest of the human family in all essential particulars, and that we are amenable to the same laws which govern mankind in general, the better it will be for us. We may for a long time transgress the laws of health with apparent impunity; but retribution will ultimately come, and unmitigated by the delay.

SANITARY HINTS FOR MARCH.

THE sudden changes of temperature which especially characterize this month, together with its chilling winds, occasion all varieties of throat ailments, and greatly aggravate rheumatic and nervous affections. Those who habitually violate the laws of health will be certain to suffer. The dissipated, sedentary, overworked, and poorly fed, fall an easy prey to the disease-producing causes arising from meteorological changes. The clothing should be shifted as the temperature changes, if necessary, several times a day. By a

little inexpensive care of this sort, weeks of sickness and large doctors' bills may be saved.

—Said Dr. Hufeland, “He who eats without labor will never thrive. No idler ever attained to a great age. Those who have been distinguished for their longevity were all men whose lives had been extremely active and laborious.”

TOBACCO.—A nasty, filthy, wicked weed,
Which does not meet a single need;
A weed that grows and thrives too well,
And which no mortal ought to sell.

—Greeley.

4th MONTH.

APRIL, 1878.

30 DAYS.

MOON'S PHASES.		BOSTON.		NEW YORK.	WASH'TON.	CHICAGO.
	D.	H. M.		H. M.	H. M.	H. M.
New Moon.....	2	4 30 eve.		4 18 eve.	4 6 eve.	3 24 eve.
First Quarter.....	10	10 11 morn.		9 59 morn.	9 47 morn.	9 5 morn.
Full Moon.....	17	1 13 morn.		1 1 morn.	0 49 morn.	0 7 morn.
Third Quarter.....	24	3 49 morn.		3 37 morn.	3 25 morn.	2 43 morn.

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa, & Oregon.				CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind., & Ill.				CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky, Missouri, & Cal.			
				SUN rises	SUN sets.	MOON rises.	H. W. Bost'n	SUN rises	SUN sets.	MOON rises.	H. W. N. Y.	SUN rises	SUN sets.	MOON rises.	
				H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
91	1	Mo	12	3 52	5 42	6 26	5 6	11 2	5 43	6 25	5 6	7 48	5 44	6 23	5 6
92	2	Tu	12	3 34	5 41	6 27	sets.	11 37	5 42	6 26	sets.	8 23	5 43	6 24	sets.
93	3	W	12	3 16	5 39	6 28	7 29	morn	5 40	6 27	7 27	8 56	5 41	6 25	7 24
94	4	Th	12	2 59	5 37	6 29	8 34	0 10	5 38	6 28	8 31	9 30	5 40	6 26	8 27
95	5	Fr	12	2 41	5 35	6 30	9 41	0 44	5 37	6 29	9 37	10 6	5 38	6 27	9 32
96	6	Sa	12	2 24	5 34	6 31	10 49	1 20	5 35	6 30	10 43	10 50	5 37	6 28	10 37
97	7	S	12	2 6	5 32	6 32	11 54	2 4	5 34	6 31	11 47	11 38	5 35	6 29	11 41
98	8	Mo	12	1 50	5 30	6 33	morn	2 52	5 32	6 32	morn	morn	5 34	6 30	morn
99	9	Tu	12	1 33	5 29	6 35	0 53	3 45	5 30	6 33	0 46	0 31	5 32	6 31	0 39
100	10	W	12	1 16	5 27	6 36	1 43	4 44	5 29	6 34	1 37	1 30	5 31	6 32	1 31
101	11	Th	12	1 0	5 25	6 37	2 25	5 52	5 27	6 35	2 20	2 38	5 29	6 33	2 15
102	12	Fr	12	0 44	5 24	6 38	2 59	7 0	5 26	6 36	2 55	3 46	5 28	6 34	2 51
103	13	Sa	12	0 29	5 22	6 39	3 28	8 1	5 24	6 37	3 25	4 47	5 26	6 35	3 23
104	14	S	12	0 13	5 20	6 40	3 54	9 0	5 22	6 38	3 53	5 46	5 25	6 36	3 51
105	15	Mo	11	59 58	5 19	6 41	4 18	9 54	5 21	6 39	4 19	6 40	5 23	6 37	4 19
106	16	Tu	11	59 44	5 17	6 42	rises.	10 48	5 19	6 40	rises.	7 34	5 22	6 38	rises.
107	17	W	11	59 29	5 16	6 44	7 38	11 38	5 18	6 41	7 34	8 24	5 20	6 39	7 31
108	18	Th	11	59 15	5 14	6 45	9 0	ev. 23	5 16	6 42	8 55	9 9	5 19	6 40	8 50
109	19	Fr	11	59 2	5 12	6 46	10 18	1 7	5 15	6 43	10 12	9 53	5 18	6 41	10 16
110	20	Sa	11	58 49	5 11	6 47	11 27	1 58	5 13	6 44	11 21	10 44	5 16	6 42	11 14
111	21	S	11	58 36	5 9	6 48	morn	2 51	5 12	6 45	morn	11 37	5 15	6 42	morn
112	22	Mo	11	58 24	5 8	6 49	0 24	3 45	5 11	6 46	0 18	ev. 31	5 13	6 43	0 11
113	23	Tu	11	58 12	5 6	6 50	1 10	4 40	5 9	6 47	1 3	1 26	5 12	6 44	0 57
114	24	W	11	58 1	5 5	6 51	1 44	5 36	5 8	6 48	1 38	2 22	5 11	6 45	1 33
115	25	Th	11	57 50	5 3	6 52	2 11	6 32	5 6	6 49	2 7	3 18	5 9	6 46	2 3
116	26	Fr	11	57 40	5 2	6 54	2 33	7 24	5 5	6 51	2 31	4 9	5 7	6 47	2 28
117	27	Sa	11	57 31	5 0	6 55	2 53	8 9	5 4	6 52	2 51	4 55	5 6	6 48	2 50
118	28	S	11	57 21	4 59	6 56	3 11	8 55	5 2	6 53	3 11	5 39	5 5	6 49	3 11
119	29	Mo	11	57 13	4 58	6 57	3 30	9 37	5 1	6 54	3 31	6 23	5 4	6 50	3 31
120	30	Tu	11	57 5	4 56	6 58	3 51	10 20	5 0	6 55	3 52	7 6	5 3	6 51	3 54

Morning and Evening Stars.—When a planet rises before the sun, it is called a morning star. When it sets after the sun, it is an evening star.

Morning Stars.—Mercury, from Jan. 10 to Mar. 20; from May 6 to July 4; and from Sept. 10 to Oct. 24.

Venus, from Feb. 20 to Dec. 5.

Mars, from Sept. 19 to the end of the year.

Jupiter, from Jan. 5 to July 26, being visible before, and setting after, sunrise.

Saturn, from Mar. 14 to Sept. 23, being visible before, and setting after, sunrise.

Evening Stars.—Mercury, from March 20 to May 6; from July 4 to Sept. 10; and from Oct. 24 to Dec. 25.

Venus, until Feb. 20 and after Dec. 5.

Mars, from Jan. 1 to Sept. 19.

Jupiter, from Jan. 1 to Jan. 5; also after May 17, rising before midnight.

Saturn, from Jan. 1 to Mar. 14; also from June 28 to the end of the year.

Facts about the Human Body.

THE average man measures five feet, three and one-half inches.

The weight of the average male adult is about 140 lbs.

The human skeleton consists of more than two hundred distinct bones.

There are more than five hundred separate muscles in the body, with an equal number of nerves and blood-vessels.

The skin contains more than two million openings, which are the outlets of an equal number of sweat-glands.

Each perspiratory duct is one-fourth of an inch in length, which will make the aggregate length of the whole about nine miles.

Every adult man has fourteen hundred square feet of lungs; or, rather, the mucous membrane lining the air-cells of his lungs, if spread upon a smooth, plane surface, would cover an extent of fourteen hundred square feet.

About two-thirds of a pint of air is inhaled and exhaled at each breath in ordinary respiration.

The full capacity of the lungs is about three hundred and twenty cubic inches.

A man breathes eighteen times a minute, and uses three thousand cubic feet, or about three hundred and seventy-five hogsheads, of air per hour.

The weight of the heart is from eight to twelve ounces. It beats one hundred thousand times in twenty-four hours.

An amount of blood equal to the whole quantity in the body passes through the heart once every minute.

The stomach daily produces nine pounds of gastric juice for the digestion of food; its capacity is about five pints.

The average man takes five and one-half pounds of food and drink each day, which amounts to one ton of solid and liquid nourishment annually.

SANITARY HINTS FOR APRIL.

WEATHER changes are so frequent during this month that "April fickleness" has become a trite simile. The disturbance of the system occasioned by the constant effort required to adapt itself to the ever-varying atmospheric conditions renders it especially susceptible to all specific causes of disease; but errors in diet are much more responsible for the "biliousness," "spring sickness," and kindred disorders which occur at this season of the year than are changes in the weather.

Every housekeeper should now begin

to search the premises, indoors and out, with special care, for the discovery of every possible source of disease germs and noxious gases. Any neighboring cesspool, vault, or barn-yard should be thoroughly cleared and disinfected before the warm sun of the succeeding month creates it into a hot-bed of disease.

—Clouds are visible ten miles high.

—Condiments cause dyspepsia.

—Cheerfulness is most conducive to health and happiness. Luther said that "the devil hates a good laugh."

5th MONTH.

MAY, 1878.

31 DAYS.

MOON'S PHASES.	BOSTON.		NEW YORK.	WASH'TON.	CHICAGO.
	D.	H. M.	H. M.	H. M.	H. M.
New Moon	2	8 6 morn.	7 54 morn.	7 42 morn.	7 0 morn.
First Quarter	9	5 48 eve.	5 36 eve.	5 24 eve.	4 42 eve.
Full Moon	16	9 47 morn.	9 35 morn.	9 23 morn.	8 41 morn.
Third Quarter	23	8 58 eve.	8 46 eve.	8 34 eve.	7 52 eve.
New Moon	31	9 4 eve.	8 52 eve.	8 40 eve.	7 58 eve.

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa, & Oregon.				CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind., & Ill.				CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky, Missouri, & Cal.			
				SUN rises	SUN sets.	MOON rises.	H. W. Bost'm	SUN rises	SUN sets.	MOON rises.	H. W. N. Y.	SUN rises	SUN sets.	MOON rises.	H. W.
				H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
121	1	W	11 56 57	4 55 6 59	4 41 1 2			4 58 6 56	4 6 7 48			5 26 52	4 10		
122	2	Th	11 56 50	4 53 7 0	sets. 11 45			4 57 6 57	sets. 8 31			5 16 53	sets.		
123	3	Fr	11 56 44	4 52 7 1	8 45 morn			4 56 6 58	8 39 9 9			4 59 6 54	8 34		
124	4	Sa	11 56 38	4 51 7 3	9 49 0 23			4 54 6 59	9 42 9 50			4 58 6 55	9 36		
125	5	S	11 56 32	4 49 7 4	10 47 1 4			4 53 7 0	10 40 10 39			4 57 6 56	10 34		
126	6	Mo	11 56 27	4 48 7 5	11 36 1 53			4 52 7 1	11 30 11 28			4 56 6 57	11 24		
127	7	Tu	11 56 23	4 47 7 6	morn 2 42			4 51 7 2	morn morn			4 55 6 58	morn		
128	8	W	11 56 19	4 46 7 7	0 17 3 34			4 50 7 3	0 12 0 20			4 54 6 59	0 7		
129	9	Th	11 56 16	4 45 7 8	0 50 4 29			4 49 7 4	0 47 1 15			4 53 7 0	0 43		
130	10	Fr	11 56 14	4 43 7 9	1 19 5 30			4 48 7 5	1 17 2 16			4 52 7 1	1 14		
131	11	Sa	11 56 12	4 42 7 10	1 45 6 32			4 47 7 6	1 44 3 18			4 51 7 2	1 43		
132	12	S	11 56 10	4 41 7 11	2 9 7 33			4 46 7 7	2 10 4 19			4 50 7 3	2 10		
133	13	Mo	11 56 9	4 40 7 12	2 33 8 27			4 44 7 8	2 34 5 13			4 49 7 3	2 36		
134	14	Tu	11 56 9	4 39 7 13	2 59 9 24			4 43 7 9	3 2 6 10			4 48 7 4	3 5		
135	15	W	11 56 9	4 38 7 14	3 29 10 22			4 42 7 10	3 34 7 8			4 47 7 5	3 39		
136	16	Th	11 56 10	4 37 7 15	rises 11 18			4 42 7 11	rises 8 4			4 46 7 6	rises		
137	17	Fr	11 56 11	4 36 7 16	9 8 ev. 7			4 41 7 12	9 2 8 53			4 45 7 7	8 55		
138	18	Sa	11 56 13	4 35 7 17	10 8 0 54			4 40 7 13	10 1 9 40			4 44 7 8	9 55		
139	19	S	11 56 15	4 34 7 18	10 55 1 42			4 39 7 14	10 49 10 28			4 44 7 9	10 43		
140	20	Mo	11 56 18	4 33 7 19	11 33 2 31			4 38 7 15	11 28 11 17			4 43 7 10	11 23		
141	21	Tu	11 56 22	4 33 7 20	morn 3 19			4 37 7 16	11 58 ev. 5			4 42 7 11	11 55		
142	22	W	11 56 26	4 32 7 21	0 2 4 5			4 37 7 16	morn 0 51			4 42 7 11	morn		
143	23	Th	11 56 31	4 31 7 22	0 27 4 52			4 36 7 17	0 24 1 38			4 41 7 12	0 21		
144	24	Fr	11 56 36	4 30 7 23	0 49 5 42			4 35 7 18	0 46 2 28			4 40 7 13	0 45		
145	25	Sa	11 56 41	4 29 7 24	1 7 6 28			4 34 7 19	1 7 3 14			4 40 7 14	1 6		
146	26	S	11 56 48	4 28 7 25	1 26 7 17			4 34 7 20	1 27 4 3			4 39 7 15	1 27		
147	27	Mo	11 56 54	4 28 7 26	1 45 8 4			4 33 7 21	1 47 4 50			4 38 7 15	1 49		
148	28	Tu	11 57 2	4 27 7 27	2 6 8 52			4 33 7 21	2 9 5 38			4 38 7 16	2 13		
149	29	W	11 57 9	4 27 7 27	2 30 9 42			4 32 7 22	2 35 6 28			4 37 7 17	2 39		
150	30	Th	11 57 17	4 26 7 28	3 0 10 33			4 32 7 23	3 5 7 19			4 37 7 18	3 11		
151	31	Fr	11 57 26	4 26 7 29	sets 11 23			4 31 7 24	sets 8 9			4 37 7 18	sets.		

THE SEASONS.

Winter begins 1877, Dec. 21, lasts 89 days.
 Spring " 1878, Mar. 20, " 93 "
 Summer " 1878, Jun. 21, " 93 "
 Autumn " 1878, Sep. 22, " 90 "
 Winter " 1878, Dec. 21.

Length of tropical year, 365 days, 5 hours, and 36 minutes.

Days longest about June 24, and shortest about Dec. 19.

The Tides.—The tides are a phenomenon of daily occurrence upon the sea-coast everywhere; but although their cause is a very simple one, it is little understood by most people. The tides are produced by the attraction of the sun and moon, the latter exercising the greater influence. As the water of the ocean is nearer the moon than the solid earth underneath, it is more strongly attracted, and thus a ridge of water follows the moon in her apparent revolution around the

Look out for Germs.

EVERY one ought to know that most of the dangerous acute diseases, such as typhoid fever, cholera, spinal meningitis, with dysentery and other diseases prevalent at this season of the year, are produced by the reception into the system of germs. These germs, when received into the system, occasion great disturbance, and often cause death in spite of the most assiduous care and attention that physicians and nurses can give. The only safety lies in keeping these noxious intruders out of the system.

Disease germs are always present wherever decay of organic matters is in progress. If there is a foul smell anywhere in the vicinity, do not rest until its source is discovered. It may be a neighboring hog-pen, barn-yard, or poultry house, a neglected cesspool or vault. The source of mischief may be even closer by. It may consist of a decaying wood-pile, putrescent vegetables in the cellar, carrion under the house, a foul cistern, a neglected closet, an odorous wood-box, molding paper on the walls, or any one of a hundred other sources of putrefactive germs. Whatever the cause may be, search it out and remove it; and do not cease the search until the cause is wholly removed and the atmosphere of home wholly freed from these noisome enemies of life and health.

The great remedy for germs is disinfection. The best disinfecting and deodorizing agents are the cheapest, and can be applied by any one, as they are always at hand. Pure air and dry earth are nature's great disinfecting agents. Fresh air should be used abundantly, and dry earth plentifully. Chloride of lime, copperas, pulverized charcoal, and permanganate of potash, are very cheap and efficient disinfectants, and should be freely used.

Beware of germs. Beware of bad smells. Wherever there is a bad odor there are myriads of poisonous germs. They go together. Rout them.

SANITARY HINTS FOR MAY.

WITH the arrival of this month the time has fully come for a thorough renovation of every inhabited premises. Every nook and corner of the house should be thoroughly cleansed, from cellar to garret. Pantries, closets, spare bedrooms, and woodshed should receive as thorough attention as any portion of the house, for it is in these out-of-the-way places that dust and noxious germs accumulate. The cellar, cistern, well, cesspool, vault, and back-yard generally, should receive special attention. It is the sacred duty of the

head of every household, dormitory, hotel, hospital, or other human habitat, to secure the premises from every taint of filth.

—If idle people only knew that the enjoyment of rest and pleasure is to be attained only by real, honorable labor, we should have fewer valetudinarians and hypochondriacs in the world.

—Bishop Ames, of the M. E. Church, said in a conference of that denomination held in Virginia, "Tobacco is doing more harm to the church than whisky."

6th MONTH.

JUNE, 1878.

30 DAYS.

MOON'S PHASES.		BOSTON.		NEW YORK.	WASH'TON.	CHICAGO.
	D.	H. M.		H. M.	H. M.	H. M.
First Quarter.....	7	11 11 eve.		10 59 eve.	10 47 eve.	10 5 eve.
Full Moon.....	14	7 7 eve.		6 55 eve.	6 43 eve.	6 1 eve.
Third Quarter.....	22	2 31 eve.		2 19 eve.	2 7 eve.	1 25 eve.
New Moon.....	30	7 47 morn.		7 35 morn.	7 23 morn.	6 41 morn.

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa & Oregon.					CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind., & Ill.				CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky Missouri, & Cal.		
				SUN rises	SUN sets.	MOON sets.	H. W. Bost'n		SUN rises	SUN sets.	MOON sets.	H. W. N. Y.	SUN rises	SUN sets.	MOON sets.
				H. M. S.	H. M.	H. M.	H. M.		H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
152	1	Sa	11 57 35	4 25	7 30	8 40	morn		4 31	7 25	8 33	8 56	4 36	7 19	8 27
153	2	S	11 57 44	4 25	7 31	9 32	0 10		4 30	7 25	9 26	9 40	4 36	7 20	9 20
154	3	Mo	11 57 54	4 24	7 31	10 17	0 54		4 30	7 26	10 12	10 27	4 35	7 20	10 6
155	4	Tu	11 58 4	4 24	7 32	10 52	1 41		4 30	7 27	10 48	11 16	4 35	7 21	10 44
156	5	W	11 58 15	4 24	7 33	11 23	2 30		4 29	7 27	11 20	morn	4 35	7 22	11 17
157	6	Th	11 58 25	4 23	7 34	11 49	3 19		4 29	7 28	11 47	0 5	4 35	7 22	11 46
158	7	Fr	11 58 36	4 23	7 34	morn	4 8		4 29	7 29	morn	0 54	4 34	7 23	morn
159	8	Sa	11 58 48	4 23	7 35	0 13	5 1		4 28	7 29	0 13	1 47	4 34	7 23	0 13
160	9	S	11 58 59	4 23	7 35	0 36	5 59		4 28	7 30	0 37	2 45	4 34	7 24	0 38
161	10	Mo	11 59 11	4 23	7 36	1 0	7 0		4 28	7 30	1 3	3 46	4 34	7 25	1 6
162	11	Tu	11 59 23	4 22	7 37	1 28	8 0		4 28	7 31	1 32	4 46	4 34	7 25	1 36
163	12	W	11 59 35	4 22	7 37	2 1	9 1		4 28	7 31	2 6	5 47	4 34	7 25	2 12
164	13	Th	11 59 47	4 22	7 38	2 41	10 3		4 28	7 31	2 48	6 49	4 34	7 26	2 55
165	14	Fr	12 0 0	4 22	7 38	rises.	11 3		4 28	7 32	rises.	7 49	4 34	7 26	rises.
166	15	Sa	12 0 12	4 22	7 38	8 47	11 55		4 28	7 33	8 41	8 41	4 34	7 27	8 34
167	16	S	12 0 25	4 22	7 39	9 29	ev. 40		4 28	7 33	9 24	9 26	4 34	7 27	9 18
168	17	Mo	12 0 38	4 22	7 39	10 2	1 22		4 28	7 33	9 58	10 8	4 34	7 27	9 53
169	18	Tu	12 0 51	4 22	7 39	10 29	2 5		4 28	7 34	10 25	10 51	4 34	7 28	10 22
170	19	W	12 1 4	4 23	7 40	10 51	2 46		4 28	7 34	10 49	11 32	4 34	7 28	10 46
171	20	Th	12 1 17	4 23	7 40	11 11	3 25		4 28	7 34	11 10	ev. 11	4 34	7 28	11 9
172	21	Fr	12 1 30	4 23	7 40	11 29	4 5		4 29	7 35	11 30	0 51	4 35	7 29	11 30
173	22	Sa	12 1 43	4 23	7 40	11 48	4 47		4 29	7 35	11 50	1 33	4 35	7 29	11 51
174	23	S	12 1 56	4 23	7 41	morn	5 34		4 29	7 35	morn	2 20	4 35	7 29	morn
175	24	Mo	12 2 8	4 23	7 41	0 8	6 23		4 29	7 35	0 10	3 9	4 35	7 29	0 13
176	25	Tu	12 2 21	4 24	7 41	0 30	7 18		4 30	7 35	0 33	4 4	4 36	7 29	0 38
177	26	W	12 2 34	4 24	7 41	0 57	8 13		4 30	7 35	1 2	4 59	4 36	7 29	1 7
178	27	Th	12 2 46	4 24	7 41	1 30	9 10		4 31	7 35	1 36	5 56	4 36	7 29	1 43
179	28	Fr	12 2 59	4 25	7 41	2 12	10 9		4 31	7 35	2 19	6 55	4 37	7 29	2 26
180	29	Sa	12 3 11	4 25	7 41	3 5	11 7		4 31	7 35	3 13	7 53	4 37	7 29	3 20
181	30	S	12 3 23	4 26	7 41	sets.	11 58		4 32	7 35	sets.	8 44	4 38	7 29	sets.

earth. Again, the solid globe of the earth being nearer the moon than the water upon the opposite side, the earth is drawn away from the water there, producing a similar ridge, which travels around the earth in the same direction, but about twelve hours later. The influence of the sun is precisely similar, but is only about two-fifths as great. When the sun, the moon, and the earth are in a straight line, the sun and moon act together, and the tide rises the highest and falls the

lowest that it ever does, and is known as *spring* tide. When the sun and moon are at right angles, as seen from the earth, the tide does not rise so high, and does not fall so low, as in the former case, and is known as *neap* tide. Spring tide occurs at the new and full moons; neap tides at the first and last quarters.

Owing to the fact that the lunar day is fifty minutes longer than the solar day, the tides occur that much later each day.

Nature's Condiments.

A CONDIMENT is something added to food to render it more palatable than it would otherwise be. Condiments are not, in themselves, nutritious, but are supposed to encourage the digestion of food, and thus to aid nutrition. There can be no doubt that condiments are necessary articles of diet. The question of interest is, To what extent are condiments necessary, and what kinds are required? If the average cook were asked the question, the answer would be, Salt, pepper, mustard, spice, and vinegar are indispensable; while cloves, cinnamon, cardamoms, and sundry other articles, are useful, and, so far as the quantity used is concerned, the more the better.

A careful examination of the subject from a physiological standpoint is sufficient to convince any candid person that none of the condiments named are in any degree essential articles of diet, while each of them possesses deleterious properties. While it is true that condiments are necessary constituents of the food, it is also true that nature has mingled with the other elements of food, in their natural state, just the proper kind of condiments, and in exactly the right proportions; and to the unperverted taste, no wholesome article is unpalatable without the addition of any one of the condiments named. The delicate flavors and agreeable odors which are found in various fruits, grains, and other productions which constituted man's natural diet, are nature's condiments; and, to a natural taste, these delicate properties are far more grateful than the exciting, stimulating, and disease-producing condiments which are demanded by the perverted appetite.

That the use of artificial condiments is wholly a matter of habit is shown by the fact that condiments which are highly prized by one nation are exceedingly repugnant to the tastes of another.

SANITARY HINTS FOR JUNE.

THE heat of advancing summer, together with the moisture from frequent rains and heavy dews, favors the increased production of germs and gases wherever decomposable matter is left exposed. Nothing which can undergo putrefactive decomposition should be allowed to remain within the vicinity of any human habitation. In order to avoid the bowel disturbances which annually begin in this month and prevail during the two succeeding months, strict attention must be paid to the dietary. Avoid all kinds of rich, greasy,

or highly seasoned food. Avoid foods, especially vegetables, which have become too old, as sprouting potatoes. Especially avoid unripe fruit.

—Cleanliness is next to godliness.

—A man advertises for a person to undertake the sale of a new medicine which he asserts will "prove highly lucrative to the undertaker."

—More people annually die from want of attention to the laws of health than from war, plague, and famine combined.

7th MONTH.

JULY, 1878.

31 DAYS.

MOON'S PHASES.		BOSTON.		NEW YORK.		WASH'TON.		CHICAGO.	
	D.	H. M.		H. M.		H. M.		H. M.	
First Quarter.....	7	3 36 morn.		3 24 morn.		3 12 morn.		2 30 morn.	
Full Moon.....	14	6 11 morn.		5 59 morn.		5 47 morn.		5 5 morn.	
Third Quarter.....	22	7 32 morn.		7 20 morn.		7 8 morn.		6 26 morn.	
New Moon.....	29	4 56 eve.		4 44 eve.		4 32 eve.		3 50 eve.	

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa, & Oregon.				CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind., & Ill.				CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky Missouri, & Cal.		
				SUN rises	SUN sets.	MOON sets.	H. W. Bost'n	SUN rises	SUN sets.	MOON sets.	H. W. N. Y.	SUN rises	SUN sets.	MOON sets.
				H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
182	1	Mo	12 3 35	4 27	7 41	8 52	morn	4 32	7 35	8 48	9 28	4 38	7 29	8 43
183	2	Tu	12 3 46	4 27	7 41	9 24	0 42	4 33	7 35	9 21	10 13	4 39	7 29	9 18
184	3	W	12 3 58	4 28	7 40	9 52	1 27	4 33	7 35	9 50	10 58	4 39	7 29	9 49
185	4	Th	12 4 8	4 28	7 40	10 17	2 12	4 34	7 34	10 17	11 43	4 40	7 29	10 16
186	5	Fr	12 4 19	4 29	7 40	10 40	2 57	4 35	7 34	10 41	morn	4 40	7 28	10 42
187	6	Sa	12 4 29	4 30	7 40	11 4	3 43	4 35	7 34	11 7	0 29	4 41	7 28	11 9
188	7	S	12 4 39	4 30	7 39	11 31	4 32	4 36	7 34	11 36	1 18	4 41	7 28	11 38
189	8	Mo	12 4 48	4 31	7 39	morn	5 31	4 36	7 33	morn	2 17	4 42	7 28	morn
190	9	Tu	12 4 57	4 32	7 38	0 1	6 34	4 37	7 33	0 6	3 20	4 43	7 27	0 12
191	10	W	12 5 6	4 32	7 38	0 38	7 41	4 38	7 33	0 44	4 27	4 43	7 27	0 51
192	11	Th	12 5 14	4 33	7 37	1 23	8 47	4 38	7 32	1 30	5 33	4 44	7 27	1 38
193	12	Fr	12 5 22	4 34	7 37	2 18	9 50	4 39	7 32	2 25	6 36	4 45	7 26	2 33
194	13	Sa	12 5 29	4 35	7 36	3 20	10 50	4 40	7 31	3 27	7 36	4 45	7 26	3 34
195	14	S	12 5 36	4 35	7 36	rises.	11 41	4 41	7 31	rises.	8 27	4 46	7 25	rises.
196	15	Mo	12 5 42	4 36	7 35	8 30	ev. 23	4 41	7 30	8 26	9 9	4 47	7 25	8 23
197	16	Tu	12 5 48	4 37	7 35	8 54	0 58	4 42	7 29	8 51	9 44	4 48	7 24	8 49
198	17	W	12 5 53	4 38	7 34	9 15	1 34	4 43	7 29	9 13	10 20	4 48	7 24	9 12
199	18	Th	12 5 57	4 39	7 33	9 33	2 3	4 44	7 28	9 33	10 55	4 49	7 23	9 33
200	19	Fr	12 6 2	4 40	7 32	9 52	2 45	4 45	7 27	9 53	11 31	4 50	7 22	9 55
201	20	Sa	12 6 5	4 41	7 32	10 11	3 21	4 46	7 27	10 13	ev. 7	4 51	7 22	10 16
202	21	S	12 6 8	4 42	7 31	10 32	4 0	4 46	7 26	10 35	0 46	4 51	7 21	10 40
203	22	Mo	12 6 11	4 43	7 30	10 56	4 45	4 47	7 25	11 1	1 31	4 52	7 20	11 6
204	23	Tu	12 6 13	4 43	7 29	11 26	5 38	4 48	7 24	11 32	2 24	4 53	7 19	11 37
205	24	W	12 6 14	4 44	7 28	morn	6 38	4 49	7 24	morn	3 24	4 54	7 19	morn
206	25	Th	12 6 15	4 45	7 27	0 3	7 42	4 50	7 23	0 10	4 28	4 55	7 18	0 17
207	26	Fr	12 6 16	4 46	7 26	0 50	8 45	4 51	7 22	0 58	5 31	4 56	7 17	1 3
208	27	Sa	12 6 15	4 47	7 25	1 50	9 49	4 52	7 21	1 57	6 35	4 56	7 16	2 5
209	28	S	12 6 14	4 48	7 24	2 59	10 50	4 53	7 20	3 6	7 36	4 57	7 15	3 14
210	29	Mo	12 6 13	4 49	7 23	sets.	11 43	4 54	7 19	sets.	8 29	4 58	7 14	sets.
211	30	Tu	12 6 11	4 50	7 22	7 53	morn	4 55	7 18	7 51	9 12	4 59	7 13	7 48
212	31	W	12 6 8	4 51	7 21	8 20	0 26	4 56	7 17	8 19	9 52	5 0	7 12	8 17

CHURCH DAYS.

Ash Wednesday,	Mar. 3
Mid-Lent,	" 31
Palm Sunday,	April 14
Good Friday,	" 19
Easter Sunday,	" 21
Low "	" 28
Ascension Day,	May 30
Whit Sunday,	June 9
Trinity "	" 16
Corpus Christi,	" 20

Advent Sunday, Dec. 1

CYCLES OF TIME.

Dominical Letter,	F.
Epact,	26
Golden Number,	17
Solar Cycle,	11
Roman Indiction,	6
Julian Period,	6591
Dionysian Period,	207
Jewish Lunar Cycle,	14

Food for Infants.

THE most common cause of infantile diseases is improper food. During the warm season, especially, when bowel complaints are prevalent, those who have the charge of young children should exercise the most scrupulous care to provide for them suitable and nourishing food. It is useless to attempt to rear a child upon such food as corn-starch, sago, or any other of the numerous preparations of starch, since the digestive organs of the infant are not prepared for the proper digestion of starchy elements. It is equally useless to think of sustaining a healthy child with such food as toast-water, rice-water, or simply sweetened water, as we have sometimes seen attempted. The growing child needs highly nitrogenized food. Nothing, however, is quite so good as its natural food. The best substitute is cow's milk diluted with an equal quantity of barley-water.

In case of bowel disease in which milk will not be retained, even when taken with barley-water, a very good substitute is thin oat-meal gruel which has been boiled three or four hours and strained through a cloth. A food which will be retained upon the stomach when every other article is rejected, may be prepared by dissolving one part white of egg in three parts barley-water, adding a very little sugar to render it palatable, if necessary.

The last-described article of food will be found invaluable in severe cases of dysentery, cholera morbus, and cholera infantum, in which the patient has become greatly reduced by disease and inability to receive nourishment. In quite a large share of the cases of death among children, the patient dies from lack of nourishment, which is in many instances occasioned by the ignorance of the nurse respecting the proper mode of preparing the food.

SANITARY HINTS FOR JULY.

CONVULSIONS arising from disorders of digestion, with dysentery, and other intestinal derangements due to bad food, bad air, bad water, and improper clothing, swell the mortuary list in the large cities to nearly double that of preceding months. In this and the following month most of the cases of sunstroke occur. Long exposure in unfavorable situations should be avoided. Total abstinence from the use of stimulating drinks, with the wearing of a wet cloth in the hat, will do much to prevent the occurrence of this affection. Cases of sunstroke which occur in the large

cities are mostly in intemperate persons. Farmers are especially liable at this season to overwork in the harvest-field, in their anxiety to secure the ripe products of their fields.

—The following description of "The cottage homes of England," by Punch, is equally appropriate for thousands of American homes :—

"The cottage homes of England—
Alas, how strong they smell!
There's fever in the cesspool,
And sewage in the well.
With ruddy cheeks and flaxen curls,
The health of those gay boys and girls
Too soon will pass away."

8th MONTH.

AUGUST, 1878.

31 DAYS.

MOON'S PHASES.		BOSTON.		NEW YORK.	WASH'TON.	CHICAGO.
	D.	H. M.	H. M.	H. M.	H. M.	H. M.
First Quarter.....	5	8 35 morn.	8 23 morn.	8 11 morn.	7 29 morn.	
Full Moon.....	12	7 32 eve.	7 20 eve.	7 8 eve.	6 26 eve.	
Third Quarter.....	20	11 24 eve.	11 12 eve.	11 0 eve.	10 18 eve.	
New Moon.....	28	1 15 morn.	1 3 morn.	0 51 morn.	0 9 morn.	

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa & Oregon.				CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind., & Ill.				CALENDAR FOR Washington; Mary- land, Virginia, Kentucky Missouri, & Cal.		
				SUN rises	SUN sets.	MOON sets.	H. W. Bost'n	SUN rises	SUN sets.	MOON sets.	H. W. N. Y.	SUN rises	SUN sets.	MOON sets.
				H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
213	1	Th	12 6 5	4 52	7 20	8 44	1 6	4 56	7 16	8 45	10 34	5 17	11 8	4 45
214	2	Fr	12 6 1	4 53	7 19	9 8	1 48	4 57	7 15	9 10	11 18	5 27	10 9	12
215	3	Sa	12 5 56	4 54	7 18	9 34	2 32	4 58	7 14	9 38	morn	5 37	9 9	41
216	4	S	12 5 51	4 55	7 16	10 4	3 19	4 59	7 12	10 8	0 5	5 47	8 10	13
217	5	Mo	12 5 45	4 57	7 15	10 38	4 10	5 07	7 11	10 44	0 56	5 47	7 10	51
218	6	Tu	12 5 39	4 58	7 14	11 21	5 9	5 17	7 10	11 28	1 55	5 57	6 11	35
219	7	W	12 5 32	4 59	7 13	morn	6 19	5 27	9 morn	3 5	5 67	5 morn		
220	8	Th	12 5 24	5 07	7 11	0 11	7 29	5 37	8 0	19	4 15	5 77	4 0	27
221	9	Fr	12 5 16	5 17	7 10	1 12	8 35	5 47	6 1	19	5 21	5 87	3 1	26
222	10	Sa	12 5 7	5 27	9 2	16	9 36	5 57	5 23	6 22	5 97	1 2	30	
223	11	S	12 4 58	5 37	7 3	24	10 31	5 67	4 3	30	7 17	5 107	0 3	35
224	12	Mo	12 4 48	5 47	6 rises.	11 18	5 77	2 rises.	8 4	5 116	59 rises.			
225	13	Tu	12 4 38	5 57	4 7	19	11 56	5 87	1 7	15	8 43	5 126	58	7 15
226	14	W	12 4 27	5 67	3 7	38	ev.30	5 97	0 7	38	9 15	5 136	56	7 38
227	15	Th	12 4 15	5 77	2 7	57	1 0	5 106	58	7 58	9 46	5 146	55	7 59
228	16	Fr	12 4 3	5 87	0 8	16	1 31	5 116	57	8 18	10 17	5 146	54	8 20
229	17	Sa	12 3 50	5 96	59	8 37	2 6	5 126	56	8 40	10 52	5 156	52	8 43
230	18	S	12 3 37	5 106	57	9 0	2 42	5 136	54	9 4	11 28	5 166	51	9 8
231	19	Mo	12 3 24	5 116	56	9 27	3 22	5 146	53	9 32	ev. 8	5 176	50	9 38
232	20	Tu	12 3 10	5 126	54	10 0	4 8	5 156	52	10 7	0 54	5 186	49	10 13
233	21	W	12 2 55	5 136	52	10 45	5 2	5 166	50	10 52	1 49	5 196	47	10 56
234	22	Th	12 2 40	5 156	51	11 34	6 6	5 176	48	11 41	2 52	5 206	46	11 48
235	23	Fr	12 2 25	5 166	49	morn	7 17	5 186	47	morn	4 3	5 216	44	morn
236	24	Sa	12 2 9	5 176	48	0 37	8 23	5 196	45	0 44	5 9	5 226	43	0 51
237	25	S	12 1 53	5 186	46	1 50	9 27	5 206	44	1 55	6 13	5 236	41	2 1
238	26	Mo	12 1 36	5 196	45	3 6	10 27	5 216	42	3 10	7 13	5 236	40	3 15
239	27	Tu	12 1 19	5 206	43	sets.	11 20	5 226	41	sets.	8 6	5 246	38	sets.
240	28	W	12 1 2	5 216	41	6 45	morn	5 236	39	6 45	8 49	5 256	37	6 44
241	29	Th	12 0 44	5 226	40	7 10	0 3	5 246	38	7 11	9 29	5 266	35	7 13
242	30	Fr	12 0 26	5 236	38	7 36	0 43	5 256	36	7 39	10 10	5 276	34	7 42
243	31	Sa	12 0 8	5 246	36	8 5	1 24	5 266	34	8 9	10 57	5 286	32	8 13

The Moon. — Our nearest celestial neighbor, the moon, although less than 240,000 miles distant, is still a profound mystery in many particulars, notwithstanding the close and assiduous scrutiny to which it has been subjected for many years by the most skillful astronomers. Its diameter is 2,160 miles. It revolves about the earth once in 27 days, 7 hours, and 44 minutes. Owing to the onward motion of the earth, the apparent time required for a revolution is 29 days, 12

hours, and 14 minutes. To this motion is due the various phases through which the moon passes in each lunar month. The moon shines by light reflected from the sun by its surface, one-half of its globe being constantly lighted by the sun's rays. The amount of illuminated surface visible to us depends upon the position of the moon relative to the earth. When the moon is between the earth and the sun, it presents to us its dark side and is called *new moon*. When

Dysentery.

THIS disease consists of an inflammation of the large intestine, or colon. In mild cases, the disease is limited to the rectum. The local inflammation is accompanied by general fever, together with the discharge of mucus, with more or less blood. The cause of the disease is sometimes obscure; improper diet, bad water, foul air, or exposure to wet and cold, during the hot months, may be mentioned as the most common causes of the disease.

In the treatment of this malady, energetic measures should be used to diminish the local inflammation, and to subdue the general fever. This may be done best by the use of fomentations and compresses over the bowels and abdomen, together with the wet-hand rub and wet-sheet pack, as frequently as the severity of the case demands. Great care should be taken to keep the extremities thoroughly warmed. If the head is unnaturally hot, cold applications may be made to it. If spasms occur, great relief may be obtained in an application of ice or very cold water to the head and upper portion of the spine. Local pain may be greatly relieved by the use of warm or cool enemata. Great care should be exercised to keep the patient quiet. His food should be such as will be easily digested, while it is of such a character that it will not be a source of irritation to the mucous membrane.

It is a mistaken notion that fruit is a cause of this disease. It may be occasioned by eating unripe fruit; but the immaturity of the fruit is the cause of the disturbance, being a source of irritation to the intestinal canal on account of its indigestibility. Ripe fruit not only does not occasion dysentery, but some kinds of fruit, as blackberries, raspberries, and grapes, are conducive to recovery when freely used. Fruit is rarely harmful if eaten properly, being taken at meals only, in moderate quantity, and thoroughly masticated.

SANITARY HINTS FOR AUGUST.

IN cities the mortality of infants from cholera infantum, diarrhea, and dysentery, frequently becomes really appalling during this month, and thousands of bereaved parents murmur at the dealings of Providence, when unwholesome food, as milk from diseased and poorly fed animals, impure air, and lack of careful nursing, are almost the sole causes. Thousands of innocents are sacrificed by indiscriminate dosing with powders, pills, teas, and sundry other "regular," "irregular," and domestic compounds. Simple remedies and good

nursing, with proper food, will do more for the little sufferers than any drug in the materia medica. One of the great causes of stomach and bowel derangements during the hot weeks of July and August is the free use of iced water, iced tea, iced cream, and other ices.

—The greatest victory a man can win is the complete mastery of his appetite. The great secret of success is persevering effort and unrelenting firmness in adhering to the course marked out for pursuit. Occasional deviations are disastrous.

9th MONTH. SEPTEMBER, 1878. 30 DAYS.

MOON'S PHASES.			BOSTON.	NEW YORK.	WASH'TON.	CHICAGO.
	D.	H. M.	H. M.	H. M.	H. M.	H. M.
First Quarter.....	3	3 42 eve.	3 30 eve.	3 18 eve.	2 36 eve.	
Full Moon.....	11	11 5 morn.	10 53 morn.	10 41 morn.	9 59 morn.	
Third Quarter.....	19	1 46 eve.	1 34 eve.	1 22 eve.	0 40 eve.	
New Moon.....	26	9 26 morn.	9 14 morn.	9 2 morn.	8 20 morn.	

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa & Oregon.					CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind., & Ill.				CALENDAR FOR Washington; Vir- ginia, Kentucky Missouri, & Cal.		
				SUN rises	SUN sets.	MOON sets.	H. W. Bost'n		SUN rises	SUN sets.	MOON sets.	H. W. N. Y.	SUN rises	SUN sets.	MOON sets.
				H. M. S.	H. M.	H. M.	H. M.		H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.
244	1	S		11 59 49	5 25 6 35	8 38	2 10		5 27 6 33	8 44	11 45	5 29 6 31	8 50		
245	2	Mo		11 59 30	5 26 6 33	9 19	2 59		5 28 6 31	9 26	morn	5 30 6 29	9 33		
246	3	Tu		11 59 11	5 27 6 31	10 8	3 55		5 29 6 30	10 15	0 41	5 31 6 28	10 23		
247	4	W		11 58 52	5 28 6 30	11 5	4 57		5 30 6 28	11 13	1 43	5 32 6 26	11 20		
248	5	Th		11 58 32	5 29 6 28	morn	6 6		5 31 6 26	morn	2 52	5 33 6 25	morn		
249	6	Fr		11 58 12	5 30 6 26	0 9	7 16		5 32 6 25	0 16	4 2	5 33 6 23	0 23		
250	7	Sa		11 57 52	5 31 6 24	1 15	8 17		5 33 6 23	1 21	5 3	5 34 6 22	1 27		
251	8	S		11 57 31	5 33 6 23	2 22	9 12		5 34 6 21	2 27	5 58	5 35 6 20	2 32		
252	9	Mo		11 57 10	5 34 6 21	3 27	10 2		5 35 6 20	3 31	6 48	5 36 6 18	3 36		
253	10	Tu		11 56 50	5 35 6 19	4 30	10 44		5 36 6 18	4 32	7 30	5 37 6 17	4 35		
254	11	W		11 56 29	5 36 6 17	rises.	11 23		5 37 6 16	rises.	8 9	5 38 6 15	rises.		
255	12	Th		11 56 8	5 37 6 16	6 22	11 56		5 38 6 15	6 24	8 42	5 39 6 14	6 25		
256	13	Fr		11 55 47	5 38 6 14	6 42	ev. 28		5 39 6 13	6 45	9 14	5 40 6 12	6 47		
257	14	Sa		11 55 25	5 39 6 12	7 3	0 58		5 40 6 11	7 7	9 44	5 41 6 11	7 11		
258	15	S		11 55 4	5 40 6 10	7 29	1 33		5 41 6 10	7 34	10 19	5 41 6 9	7 39		
259	16	Mo		11 54 43	5 41 6 8	8 0	2 11		5 42 6 8	8 6	10 57	5 42 6 7	8 12		
260	17	Tu		11 54 22	5 42 6 7	8 37	2 54		5 43 6 6	8 44	11 40	5 43 6 6	8 51		
261	18	W		11 54 1	5 43 6 5	9 24	3 43		5 44 6 4	9 32	ev. 29	5 44 6 4	9 39		
262	19	Th		11 53 39	5 44 6 3	10 22	4 39		5 45 6 3	10 29	1 25	5 45 6 2	10 36		
263	20	Fr		11 53 18	5 45 6 1	11 27	5 44		5 46 6 1	11 34	2 30	5 46 6 1	11 45		
264	21	Sa		11 52 57	5 46 6 0	morn	6 54		5 47 5 59	morn	3 40	5 47 5 59	morn		
265	22	S		11 52 36	5 47 5 58	0 40	7 58		5 48 5 58	0 45	4 44	5 48 5 58	0 51		
266	23	Mo		11 52 16	5 49 5 56	1 56	8 59		5 49 5 56	2 0	5 45	5 49 5 56	2 5		
267	24	Tu		11 51 55	5 50 5 54	3 14	9 57		5 50 5 54	3 17	6 43	5 50 5 54	3 20		
268	25	W		11 51 35	5 51 5 53	4 33	10 50		5 51 5 53	4 34	7 36	5 51 5 53	4 35		
269	26	Th		11 51 14	5 52 5 51	sets.	11 38		5 52 5 51	sets.	8 24	5 51 5 51	sets.		
270	27	Fr		11 50 54	5 53 5 49	6 3	morn		5 53 5 49	6 6	9 7	5 52 5 50	6 10		
271	28	Sa		11 50 34	5 54 5 47	6 35	0 22		5 54 5 48	6 40	9 58	5 53 5 48	6 45		
272	29	S		11 50 15	5 55 5 45	7 14	1 12		5 55 5 46	7 20	10 40	5 54 5 46	7 27		
273	30	Mo		11 49 55	5 56 5 44	8 1	1 54		5 56 5 44	8 9	11 33	5 55 5 45	8 16		

it is upon the opposite side of the earth from the sun, we see the whole of the lighted portion. At points between these two extremes, various proportions of the luminous part are visible. It is a curious fact that the moon revolves upon its axis in the same time required for its revolution about the earth, so that we never see but one side of it.

Mars' Moons.—One of the most interesting discoveries of recent times was that of the three moons of Mars, made by

Prof. Hall, at Washington, D. C., and Prof. Draper, on the Hudson, in August, 1877. It had been supposed by astronomers that Mars had no moons, though some have predicted that satellites would be discovered. The planet approached nearer to the earth in 1877 than it had done previously for more than thirty years, which made their discovery possible. It will be ten years before the planet will again be near enough to make its satellites visible.

Irrigation and Ague.

It is now generally considered that ague is produced by the reception into the system of certain peculiar microscopic germs which are the spores of a certain species of fungi. The ague plant flourishes in situations which are alternately submerged and dried. Wherever rivers overflow their banks, or marshes or other low places in the vicinity of lakes or ponds are frequently flooded and then dried during the warm season, ague and bilious fevers are certain to be abundant. Mill-ponds are potent sources of malarial poisoning.

In sections where irrigation is practiced, all the conditions required for a luxurious growth of the ague plant are present. Large areas which before irrigation were perfectly salubrious are converted into hot-beds for malarial poison, giving rise to ague, congestive chills, remittent or bilious fever, and typho-malarial fever in case typhoid germs also are present. This is one of the evils of irrigation which it may not be practical to entirely obviate except by avoiding irrigation so far as possible in the later summer months. Dwellings should be situated as remote as possible from the irrigated section, and, by preference, upon an elevated site. The employment of other preventives mentioned under the heading "Ague," page 31, will also be of advantage.

Those employed in irrigating land are especially apt to suffer. Wading about in the cold water for hours at a time, while the rest of the person is exposed to the rays of the hot sun, they are not only in danger from sunstroke, but are made especially liable to the influence of malaria by the constant and immediate contact with it, and by the debilitating effect upon the general system of such exposure. Those who are obliged to work in the water should wear thick rubber boots with thick woolen stockings, which should be frequently exchanged for dry ones, as the feet are quite likely to perspire.

SANITARY HINTS FOR SEPTEMBER.

WITH this month begin the annual autumnal fevers which render some sections almost uninhabitable during this season of the year. In malarious districts, ague, remittent or bilious and typho-malarial fevers create a lively demand for doctors, quinine, and every nostrum reputed to possess antiperiodic virtues. In Southern malarious districts, yellow fever devastates whole cities in seasons favorable to the development of the disease. To avoid the contraction of these diseases, all possible pains should be taken to prevent the reception

into the system of the organic poisons which occasion them. Malarious districts should be avoided, especially at night. When possible, those living in malarious sections should go abroad for a few weeks during this and the following month, so as to escape malarial poisoning.

WINE is a poison, so is tea,
Though in a different shape :
What matter whether one be killed
By canister or grape?

—A reporter stated that a woman who had met with a sudden death "died without medical assistance."

10th MONTH.

OCTOBER, 1878.

31 DAYS.

MOON'S PHASES.		BOSTON.		NEW YORK.	WASH'TON.	CHICAGO.
	D.	H. M.		H. M.	H. M.	H. M.
First Quarter.....	3	2 17 morn.	2 5 morn.	1 53 morn.	1 11 morn.	
Full Moon.....	11	4 10 morn.	3 58 morn.	3 46 morn.	3 4 morn.	
Third Quarter.....	19	2 26 morn.	2 14 morn.	2 2 morn.	1 20 morn.	
New Moon.....	25	6 14 eve.	6 2 eve.	5 50 eve.	5 8 eve.	

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa, & Oregon.				CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind., & Ill.				CALENDAR FOR Washington; Mary- land, Virginia, Kentucky Missouri, & Cal.			
				SUN rises	SUN sets.	MOON sets.	H. W. Bost'n	SUN rises	SUN sets.	MOON sets.	H. W. N. Y.	SUN rises	SUN sets.	MOON sets.	
			H. M. S.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	
274	1	Tu	11 49 36	5 57	5 42	8 58	2 47	5 57	5 43	9 5	morn	5 56	5 43	9 12	
275	2	W	11 49 17	5 58	5 40	10 1	3 43	5 58	5 41	10 8	0 29	5 57	5 42	10 15	
276	3	Th	11 48 59	6 0	5 39	11 7	4 43	5 59	5 39	11 13	1 29	5 58	5 40	11 20	
277	4	Fr	11 48 40	6 1	5 37	morn	5 48	6 0	5 38	morn	2 34	5 59	5 39	morn	
278	5	Sa	11 48 22	6 2	5 35	0 14	6 50	6 2	5 36	0 19	3 36	6 0	5 37	0 24	
279	6	S	11 48 5	6 3	5 33	1 20	7 45	6 2	5 34	1 24	4 31	6 1	5 35	1 27	
280	7	Mo	11 47 48	6 4	5 32	2 23	8 35	6 3	5 33	2 26	5 21	6 2	5 34	2 28	
281	8	Tu	11 47 31	6 5	5 30	3 25	9 20	6 4	5 31	3 26	6 6	6 3	5 33	3 28	
282	9	W	11 47 15	6 6	5 28	4 25	10 3	6 5	5 30	4 26	6 49	6 4	5 31	4 26	
283	10	Th	11 46 59	6 7	5 27	5 26	10 43	6 6	5 28	5 25	7 29	6 5	5 29	5 24	
284	11	Fr	11 46 43	6 8	5 25	rises.	11 22	6 7	5 26	rises.	8 8	6 6	5 28	rises.	
285	12	Sa	11 46 28	6 10	5 24	5 34	11 57	6 8	5 25	5 38	8 43	6 7	5 26	5 43	
286	13	S	11 46 14	6 11	5 22	6 3	ev. 32	6 9	5 23	6 8	9 18	6 8	5 25	6 14	
287	14	Mo	11 46 0	6 12	5 20	6 38	1 9	6 10	5 22	6 45	9 55	6 9	5 23	6 51	
288	15	Tu	11 45 47	6 13	5 19	7 22	1 50	6 12	5 20	7 29	10 36	6 10	5 22	7 36	
289	16	W	11 45 34	6 14	5 17	8 15	2 36	6 13	5 19	8 22	11 22	6 11	5 21	8 29	
290	17	Th	11 45 22	6 15	5 15	9 16	3 25	6 14	5 17	9 23	ev. 11	6 12	5 19	9 30	
291	18	Fr	11 45 10	6 17	5 14	10 25	4 20	6 15	5 16	10 30	1 6	6 13	5 18	10 36	
292	19	Sa	11 44 59	6 18	5 12	11 36	5 20	6 16	5 14	11 41	2 6	6 14	5 16	11 46	
293	20	S	11 44 49	6 19	5 11	morn	6 24	6 17	5 13	morn	3 10	6 15	5 15	morn	
294	21	Mo	11 44 40	6 20	5 9	0 51	7 27	6 18	5 11	0 54	4 13	6 16	5 14	0 57	
295	22	Tu	11 44 31	6 21	5 8	2 6	8 25	6 19	5 10	2 8	5 11	6 17	5 12	2 10	
296	23	W	11 44 23	6 23	5 6	3 23	9 22	6 20	5 9	3 24	6 8	6 18	5 11	3 24	
297	24	Th	11 44 15	6 24	5 5	4 42	10 18	6 21	5 7	4 41	7 4	6 19	5 10	4 40	
298	25	Fr	11 44 8	6 25	5 3	sets.	11 12	6 23	5 6	sets.	7 58	6 20	5 8	sets.	
299	26	Sa	11 44 2	6 26	5 2	5 6	morn	6 24	5 4	5 11	8 48	6 21	5 7	5 17	
300	27	S	11 43 57	6 28	5 0	5 50	0 2	6 25	5 3	5 57	9 35	6 22	5 6	6 3	
301	28	Mo	11 43 52	6 29	4 59	6 44	0 49	6 26	5 2	6 51	10 26	6 23	5 5	6 58	
302	29	Tu	11 43 49	6 30	4 58	7 47	1 40	6 27	5 0	7 54	11 20	6 24	5 3	8 2	
303	30	W	11 43 46	6 31	4 56	8 54	2 34	6 28	4 59	9 1	morn	6 25	5 2	9 7	
304	31	Th	11 43 43	6 33	4 55	10 3	3 27	6 30	4 58	10 8	0 13	6 26	5 1	10 14	

The United States.—This country, now in the one hundred and second year of its existence, has developed with a rapidity unparalleled in the annals of history. The original thirteen States have increased in number to thirty-eight, besides which there are eight organized Territories and a Federal District.

Its area is estimated at more than three million square miles, or about two billion acres in all, one-fourth of which is in a state

of cultivation. The present number of inhabitants is over forty-three millions, while the population increases at the rate of about one million a year.

Chinese Almanacs.—In China and Japan the almanac is one of the most important works published. The Chinese month is lunar, and an extra month is added every three years. The Japanese months correspond with the signs of the Zodiac.

Chinese Respect for Germs.

IN civilized lands, little regard is paid by the masses to the dangers which attend exposure to the influence of foul odors, with the myriads of disease germs which usually accompany them. People who are otherwise very intelligent, build beautiful residences in the very center of malarial hot-beds, and dwell year after year in immediate proximity to abominable smells, constantly exposed to the death-dealing influence of these potent causes of disease, without a thought of any impropriety in their course. The "heathen Chinese" is much more rational in his conduct in this respect. Instead of ignoring foul smells and malarial and other similar causes of disease, he elevates them to the dignity of a god, whom he worships under the "celestial" name of Fung-Shuy. To this deity he consecrates every locality where noxious odors and miasms are present. His own nose he takes as the interpreter of the will of Fung-Shuy; and when the latter thus admonishes him to avoid this spot or to vacate that, he obeys promptly, and so does not die of typhoid, typho-malarial, or bilious fever, as do his more civilized Christian brethren.

Some time since, some missionaries in China, in order to demonstrate to the benighted heathen the folly of idol worship, and to lessen their faith in Fung-Shuy, built their residences at a spot which the sanitary god said, Avoid. The result which very naturally followed was as might be expected: the missionaries died, and Fung-Shuy triumphed. And so Fung-Shuy is constantly triumphing all over the civilized world, and annually counts his victims by millions.

The founders of cities and villages locate them without reference to the salubrity of the surroundings, it may be in the very center of a malarious district, or adjacent to a marsh or stagnant pond, which will be a fruitful source of agues, and the whole train of malarial diseases, and then wonder at the ill-health of the inhabitants!

SANITARY HINTS FOR OCTOBER.

THE decay of fruits and foliage incidental to this month results in the production of noxious gases in increased quantity, and were it not for the beneficial influence of early frosts, this would be the most sickly month of the year. Intermittent and remittent fevers continue to prevail, together with typhoid and typho-malarial fevers, and cerebro-spinal meningitis. Careful attention to bathing, a rigid dietary, and proper clothing will do much to protect the system against the influence of these causes of disease, by enabling the vital

forces to eliminate the poison before it accumulates to such a degree as to occasion actual disease. Those who would avoid colds, influenzas, and other results of inequality of temperature, should at once don warm suits of underclothing to protect their systems from the disturbances which are certain to result from chilling the extremities and other portions of the body.

—The richer a man makes his food, the poorer his appetite becomes.

—If you expect to rate as a gentleman, do not expectorate on the floor.

11th MONTH. **NOVEMBER, 1878.** 30 DAYS.

MOON'S PHASES.				BOSTON.				NEW YORK.				WASH'TON				CHICAGO.				
				D.	H. M.				H. M.				H. M.				H. M.			
First Quarter.....				1	5 7 eve.				4 55 eve.				4 43 eve.				4 1 eve.			
Full Moon.....				9	9 50 eve.				9 38 eve.				9 26 eve.				8 44 eve.			
Third Quarter.....				17	1 14 eve.				1 2 eve.				0 50 eve.				0 8 eve.			
New Moon.....				24	4 27 morn.				4 15 morn.				4 3 morn.				3 21 morn.			

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR Boston; New England, New York State, Mich- igan, Wisconsin, Iowa & Oregon.								CALENDAR FOR New York City; Phila- delphia, Connecticut, New Jersey, Pennsyl- va'a, Ohio, Ind., & Ill.								CALENDAR FOR Washington; Maryland, Vir- ginia, Kentucky Missouri, & Cal.							
				SUN		SUN		MOON		H. W.		SUN		SUN		MOON		H. W.		SUN		SUN		MOON			
				rises	sets.	sets.	Bost'n	rises	sets.	sets.	N. Y.	rises	sets.	sets.	N. Y.	rises	sets.	sets.									
			H. M. S.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	
305	1	Fr	11 43 42	6 34 4 54	11 10 4 21	6 31 4 57	11 14 1 7	6 28 5 0	11 19																		
306	2	Sa	11 43 41	6 35 4 52	morn 5 15	6 32 4 56	morn 2 1	6 29 4 59	morn																		
307	3	S	11 43 41	6 36 4 51	0 15 6 9	6 33 4 54	0 18 2 55	6 30 4 58	0 21																		
308	4	Mo	11 43 42	6 37 4 50	1 17 7 1	6 34 4 53	1 19 3 47	6 31 4 57	1 21																		
309	5	Tu	11 43 44	6 39 4 49	2 18 7 49	6 35 4 52	2 18 4 35	6 32 4 55	2 19																		
310	6	W	11 43 46	6 40 4 48	3 18 8 33	6 37 4 51	3 18 5 19	6 33 4 55	3 17																		
311	7	Th	11 43 49	6 41 4 46	4 18 9 18	6 38 4 50	4 17 6 4	6 34 4 53	4 15																		
312	8	Fr	11 43 54	6 43 4 45	5 21 10 2	6 39 4 49	5 18 6 48	6 35 4 52	5 15																		
313	9	Sa	11 43 59	6 44 4 44	rises. 10 47	6 40 4 48	rises. 7 33	6 36 4 52	rises.																		
314	10	S	11 44 4	6 45 4 43	4 40 11 30	6 41 4 47	4 46 8 16	6 37 4 51	4 52																		
315	11	Mo	11 44 11	6 46 4 42	5 21 ev. 11	6 43 4 46	5 28 8 57	6 39 4 50	5 36																		
316	12	Tu	11 44 19	6 48 4 41	6 11 0 51	6 44 4 45	6 19 9 37	6 40 4 49	6 26																		
317	13	W	11 44 27	6 49 4 40	7 11 1 35	6 45 4 44	7 17 10 21	6 41 4 48	7 24																		
318	14	Th	11 44 36	6 50 4 39	8 15 2 22	6 46 4 43	8 22 11 8	6 42 4 47	8 28																		
319	15	Fr	11 44 46	6 51 4 38	9 26 3 11	6 47 4 42	9 31 11 57	6 43 4 47	9 36																		
320	16	Sa	11 44 57	6 53 4 37	10 38 4 1	6 48 4 41	10 41 ev. 47	6 44 4 46	10 45																		
321	17	S	11 45 9	6 54 4 37	11 50 4 54	6 50 4 41	11 52 1 40	6 45 4 45	11 55																		
322	18	Mo	11 45 22	6 55 4 36	morn 5 52	6 51 4 40	morn 2 38	6 47 4 44	morn																		
323	19	Tu	11 45 35	6 56 4 35	1 4 6 52	6 52 4 39	1 5 3 38	6 48 4 44	1 6																		
324	20	W	11 45 50	6 57 4 34	2 18 7 51	6 53 4 39	2 18 4 37	6 49 4 43	2 17																		
325	21	Th	11 46 5	6 58 4 34	3 35 8 50	6 54 4 38	3 33 5 36	6 50 4 43	3 31																		
326	22	Fr	11 46 21	7 0 4 33	4 55 9 50	6 55 4 37	4 52 6 36	6 51 4 42	4 48																		
327	23	Sa	11 46 38	7 1 4 32	sets. 10 52	6 56 4 37	sets. 7 38	6 52 4 41	sets.																		
328	24	S	11 46 55	7 2 4 32	4 26 11 49	6 58 4 36	4 34 8 35	6 53 4 41	4 41																		
329	25	Mo	11 47 14	7 3 4 31	5 26 morn	6 59 4 36	5 33 9 24	6 54 4 41	5 41																		
330	26	Tu	11 47 33	7 5 4 30	6 34 0 38	7 0 4 35	6 41 10 11	6 55 4 40	6 48																		
331	27	W	11 47 53	7 6 4 30	7 44 1 25	7 1 4 35	7 50 11 1	6 56 4 40	7 56																		
332	28	Th	11 48 13	7 7 4 30	8 55 2 15	7 2 4 34	8 59 11 48	6 57 4 39	9 4																		
333	29	Fr	11 48 34	7 8 4 29	10 2 3 2	7 3 4 34	10 6 morn	6 58 4 39	10 9																		
334	30	Sa	11 48 56	7 9 4 29	11 6 3 47	7 4 4 34	11 8 0 33	6 59 4 39	11 10																		

Influence of the Moon.—In ancient times the sun, moon, stars, and other celestial bodies were supposed to control, by some mysterious means, all mundane things. As learning and civilization have advanced, this vagary has gradually faded away, together with other absurd fancies born of the ignorance and superstition of antiquity. The ancients attributed especial power for good or evil to the moon. An insane person was sup-

posed to be smitten with some malignant influence from the moon, from which arose the name "lunatic," which means, literally, *moon-struck*. But there are very few people who now attribute to our satellite such powers. There is, however, a relic of the old superstition left in some portions of the country in the form of a belief in the influence of the moon upon crops. Many farmers observe the greatest care to plant their

Tender Meat.

THOSE who use animal food are always desirous of obtaining "tender" meat. In order to satisfy the demand for such food, the butcher and the producer resort to all sorts of devices. The former keeps the flesh of slaughtered animals after they are killed until decay has begun, in order that the natural firmness and elasticity of the tissues may be overcome by processes of decomposition. The latter treats his animals in such a manner previous to their death that their tissues become softened and disintegrated by disease. There are several means employed to effect this; chief among them are confinement and overfeeding. An exchange gives the following translation of a description of how young pigeons are fattened in Germany, as given in the North German *Allgemeine Zeitung* :—

"In order to fatten young pigeons quickly, put them, on the twentieth day, or when they commence to get feathers, into a basket with a soft layer of moss or hay on the bottom, in a place which freely admits the air, but excludes the light. Feed the birds three times daily, at intervals of five hours each, with cooked maize, opening their beaks and making them swallow successively thirty to forty grains each. The maize should be warm, but not hot. By continuing this treatment ten or twelve days, the birds will become most tender and delicate."

Such meat would doubtless be "tender" enough to suit the most fastidious epicure. In this respect the plan suggested would certainly be perfectly successful; but great care would be necessary lest nature should succumb, and actual dissolution of the poor birds occur before their heads were chopped off. Mr. Bergh would arrest the perpetrators of such cruelty.

In New Zealand, cattle are tortured and infuriated just before they are killed, for the purpose of rendering the meat tender, a custom similar to the practice of bull-baiting, once in vogue in England.

SANITARY HINTS FOR NOVEMBER.

TYPHOID and typhus fevers still continue in late autumn; scarlet fever also prevails with more than its usual fatality in some localities during this and the succeeding months. Thousands annually die of these diseases, but many more deaths occur in consequence of defective ventilation at this season of the year. Confined in-doors by the inclemency of the weather, women and children are constantly subjected to the poisonous influence of foul air, breathing over and over the disease-producing elements of expired air. There is no

doubt that this is one of the potent causes of consumption. Abundance of fresh air should be admitted daily. It is the poorest possible economy to curtail the supply of fresh air to save fuel.

—"The child has since died," was the remark appended by an Eastern journal to an account of a twelve-year-old girl who was said to have mastered logic, rhetoric, geology, botany, with mental and moral science.

—A paper has this announcement: "Two sisters want *washing*." Many brothers are in the same predicament.

12th MONTH. DECEMBER, 1878. 31 DAYS.

MOON'S PHASES.		BOSTON.		NEW YORK.	WASH'TON.	CHICAGO.
	D.	H. M.		H. M.	H. M.	H. M.
First Quarter.....	1	11 53 morn.		11 41 morn.	11 29 morn.	10 47 morn.
Full Moon.....	9	3 6 eve.		2 54 eve.	2 42 eve.	2 0 eve.
Third Quarter.....	16	10 20 eve.		10 8 eve.	9 56 eve.	9 14 eve.
New Moon.....	23	4 40 eve.		4 28 eve.	4 16 eve.	3 34 eve.
First Quarter.....	31	9 13 morn.		9 1 morn.	8 49 morn.	8 7 morn.

Day of Year.	Day of Month.	Day of Week.	Sun at Noon Mark.	CALENDAR FOR				CALENDAR FOR				CALENDAR FOR			
				Boston; New England, New York State, Michigan, Wisconsin, Iowa, & Oregon.				New York City; Philadelphia, Connecticut, New Jersey, Pennsylvania, Ohio, Ind., & Ill.				Washington; Maryland, Virginia, Kentucky, Missouri, & Cal.			
				SUN rises	SUN sets.	MOON sets.	H. W. Bost'n	SUN rises	SUN sets.	MOON sets.	H. W. N. Y.	SUN rises	SUN sets.	MOON sets.	
			H. M. S.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	H. M.	
335	1	S	11 49 19	7 10 4	29 morn	4 32	7 5 4	33 morn	1 18	7 0 4	39 morn				
336	2	Mo	11 49 42	7 11 4	28 0 8	5 19	7 6 4	33 0 9	2 5	7 1 4	38 0 10				
337	3	Tu	11 50 6	7 12 4	28 1 8	6 8	7 7 4	33 1 8	2 54	7 2 4	38 1 8				
338	4	W	11 50 30	7 13 4	28 2 8	6 56	7 8 4	33 2 8	3 42	7 3 4	38 2 6				
339	5	Th	11 50 55	7 14 4	28 3 10	7 45	7 9 4	33 3 8	4 31	7 4 4	38 3 5				
340	6	Fr	11 51 20	7 15 4	27 4 13	8 34	7 10 4	33 4 9	5 20	7 5 4	38 4 6				
341	7	Sa	11 51 46	7 16 4	27 5 17	9 24	7 11 4	33 5 12	6 10	7 6 4	38 5 7				
342	8	S	11 52 12	7 17 4	27 6 20	10 17	7 12 4	33 6 14	7 3	7 7 4	38 6 9				
343	9	Mo	11 52 39	7 18 4	27 rises.	11 8	7 13 4	33 rises.	7 54	7 7 4	38 rises.				
344	10	Tu	11 53 6	7 19 4	27 5 3	11 54	7 14 4	33 5 10	8 40	7 8 4	38 5 17				
345	11	W	11 53 34	7 20 4	27 6 8	ev. 38	7 14 4	33 6 14	9 24	7 9 4	38 6 21				
346	12	Th	11 54 2	7 20 4	28 7 17	1 21	7 15 4	33 7 22	10 7	7 10 4	38 7 28				
347	13	Fr	11 54 30	7 21 4	28 8 30	2 8	7 16 4	33 8 34	10 54	7 10 4	38 8 38				
348	14	Sa	11 54 59	7 22 4	28 9 42	2 51	7 17 4	33 9 44	11 37	7 11 4	39 9 47				
349	15	S	11 55 28	7 23 4	28 10 53	3 37	7 17 4	34 10 54	ev. 23	7 12 4	39 10 56				
350	16	Mo	11 55 57	7 24 4	29 morn	4 25	7 18 4	34 morn	1 11	7 13 4	39 morn				
351	17	Tu	11 56 27	7 24 4	29 0 6	5 20	7 19 4	34 0 6	2 6	7 13 4	40 0 5				
352	18	W	11 56 56	7 25 4	29 1 19	6 19	7 19 4	35 1 18	3 5	7 14 4	40 1 16				
353	19	Th	11 57 26	7 25 4	30 2 35	7 23	7 20 4	35 2 31	4 9	7 14 4	40 2 29				
354	20	Fr	11 57 56	7 26 4	30 3 52	8 27	7 20 4	35 3 48	5 13	7 15 4	41 3 44				
355	21	Sa	11 58 26	7 26 4	30 5 10	9 33	7 21 4	36 5 5	6 19	7 15 4	41 4 59				
356	22	S	11 58 56	7 27 4	31 6 23	10 38	7 21 4	36 6 17	7 24	7 16 4	42 6 11				
357	23	Mo	11 59 26	7 27 4	32 sets.	11 37	7 22 4	37 sets.	8 23	7 16 4	42 sets.				
358	24	Tu	11 59 56	7 28 4	32 5 21	morn	7 22 4	38 5 27	9 10	7 17 4	43 5 34				
359	25	W	12 0 26	7 28 4	33 6 35	0 24	7 23 4	38 6 40	9 52	7 17 4	44 6 43				
360	26	Th	12 0 56	7 29 4	33 7 43	1 6	7 23 4	39 7 47	10 34	7 18 4	44 7 51				
361	27	Fr	12 1 16	7 29 4	34 8 50	1 48	7 23 4	39 8 53	11 15	7 18 4	45 8 55				
362	28	Sa	12 1 56	7 29 4	35 9 54	2 29	7 24 4	40 9 55	11 54	7 18 4	46 9 57				
363	29	S	12 2 25	7 29 4	36 10 56	3 8	7 24 4	41 10 56	morn	7 19 4	46 10 56				
364	30	Mo	12 2 54	7 30 4	36 11 57	3 47	7 24 4	42 11 56	0 33	7 19 4	47 11 55				
365	31	Tu	12 3 23	7 30 4	37 12 57	4 28	7 24 4	43 12 55	1 14	7 19 4	48 12 52				

various crops at just the right time of the moon, so that they may "fill well," or "root well," or be of proper color, or derive some other advantage from the benign influence of Luna.

Science thoroughly exposes the absurdity of these notions, and yet they are sometimes held with great tenacity, even by otherwise intelligent people. The moon undoubtedly

has some slight influence upon the weather, and thus may affect crops a little. Owing to the dispersive power of the rays of the full moon, there is usually rather more rain during the "dark of the moon" than during other portions of the month, but there is no possibility that crops should be affected otherwise than they would be by increase of moisture.

Dangerous Kerosene.

THE kerosene oil sold or used in the majority of our cities is almost as dangerous a commodity as gunpowder or nitro-glycerine. Millions of dollars' worth of property has been destroyed, and hundreds of lives have been sacrificed, by the use of cheap illuminating oil. Crude kerosene contains benzine, naphtha, and other highly volatile and explosive compounds. These dangerous agents should be wholly removed by the refiner in preparing the oil for use; but the manufacturer finds it to his pecuniary advantage to allow them to remain in the oil in greater or lesser proportions. This kind of oil will burn at a much lower temperature than that which is pure, and it is to this fact that its dangerous properties are due, since it is thereby rendered explosive when used in the ordinary kerosene lamp.

It is very important to be able to distinguish dangerous oil from that which may be used without danger. The following is an excellent method for testing oil:—

Place upon the stove a pan or tin pail containing water. Float in this vessel a deep saucer or small, deep cup containing a portion of the oil to be tested. Place in the oil a thermometer, and observe the gradual increase of temperature. When the temperature reaches 70° or 80° , bring a burning match or taper near to the surface of the oil. If a flash is produced, the article is highly dangerous. Continue the observations as the temperature rises, and if a flash is observed at the temperature less than 140° , the oil is utterly unfit for use, and should not be employed for illuminating purposes. The lower the temperature at which the flash occurs, the greater the danger.

The State Legislature of Michigan has passed an act prohibiting the use or sale of kerosene oil which will flash below 140° .

SANITARY HINTS FOR DECEMBER.

OF all months in the year, this in most portions of this country is the most fatal to consumptives. Fearing exposure to cold air, they confine themselves closely within doors, and with their limited lung power soon succumb to the debilitating effects of the poisoned air. Gentle exercise out-of-doors on pleasant days is greatly preferable to confinement, even if the temperature is low. The patient may be properly clothed, so that there need be no danger of taking cold. A very important matter, too often neglected in winter, is

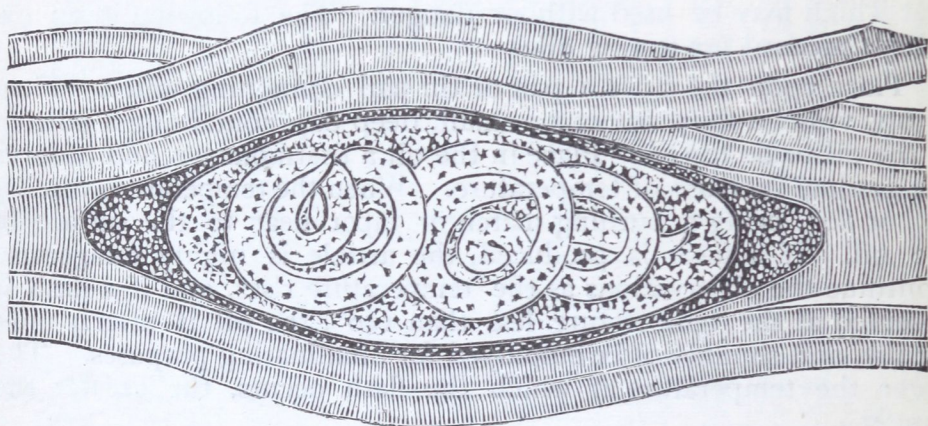
keeping the feet warm. They should be warmly clad with thick woolen hose and substantial shoes or boots. Ladies and children who wear shoes should secure additional warmth by means of leggins. The wearing of rubbers or overshoes in-doors is a practice which should be avoided, since it is injurious to the health of the feet, and by occasioning perspiration may produce serious disease.

—People who wish to get stout should eat slowly. Haste does not make waist in such cases.

The Scavenger Parasite.

TRICHINA, the terrible pork parasite, is no longer a strange word, its frequent appearance in the public prints in descriptions of cases of poisoning by this means having made it familiar to the public mind.

It would not be unreasonable to suppose that after the dangers from the use of pork as food had been so often and so thoroughly exposed as they have been during the last few years, swine's flesh would be pretty generally discarded as an article of diet. It is surprising, nevertheless, with what apparent indifference people seem willing to risk their lives in persisting in the use of an article never designed for food, eating the flesh of an animal whose nature is that of a scavenger, and whose body, at its best, abounds in diseased products.



Perhaps one reason why pork is still so largely employed as an article of diet is that *there are thousands* of people who have no faith in the existence of trichinae. They have read descriptions of the parasite, and of the terrible effects which follow its introduction into the system, but they want to see the worm for themselves. The accompanying engraving will give all a chance to see just how the worm looks when found in the flesh of diseased pork.

The cut is a very accurate representation of the manner in which the parasites are disposed in the muscles, which are their favorite haunt and constitute their permanent home if they are not received in sufficient quantity to cause death. The engraving was made from a drawing from an actual specimen which possessed a little more than ordinary interest, since it exhibited two parasites in the same capsule. The specimen was obtained from a piece of pork sent to the editor of the *Health Reformer*, last winter, for examination, by a gentleman in Wisconsin whose neighbor's family had partaken of

the pork, and had afterward suffered from a violent disease which a physician treated as cholera morbus. Several of the family died, and more might have died also had they not been warned of the danger to which they were exposed.

The only safety is in entirely discarding pork as an article of diet. There are plenty of uses for the hog, to which he may be put with perfect safety to human life, which are far better than using him for food.

Facts about Alcohol.

1. ALCOHOL is a poison. When pure, it will produce death as certainly and almost as quickly as prussic acid.

2. Alcohol is a product of fermentation, or decay. The Creator never made it. No plant produces it. No bubbling spring affords it.

3. Alcohol is an irritant. It will blister the skin, and produce inflammation of the stomach.

4. Alcohol is a narcotic. It paralyzes the nerves, and benumbs the sensibilities.

5. Alcohol destroys the blood. It dissolves the blood corpuscles, and thus impoverishes the vital fluid.

6. Alcohol causes heart disease, by changing the heart tissue for fat.

7. Alcohol causes apoplexy. It weakens the blood-vessels, and causes congestion of the brain. Alcohol weakens the muscles. It has been proven by experiment that a man can lift less after taking a glass of whisky than before.

8. Alcohol wastes vital force.

9. Alcohol causes consumption.

10. Alcohol lessens bodily heat. Travelers in the Arctic regions are obliged to be teetotalers.

11. Alcohol causes paralysis of the brain. A man who is dead drunk is temporarily paralyzed.

12. Alcohol hardens the brain.

13. Alcohol produces congestion of every organ of the body.

14. Alcohol hardens the liver, and renders it useless.

15. Alcohol produces its worst effects when taken in small doses.

16. Alcohol produces all kinds of nervous disorders.

17. Alcohol occasions cancer, ulcer, dyspepsia, and other diseases of the stomach.

18. Alcohol is the cause of more than two-thirds of the cases of disease found in the hospitals in large cities.

19. Alcohol is one of the greatest causes of pauperism.

20. Alcohol is one of the most active causes of crime. In Scotland it increased the frequency of crime 400 per cent.

21. Alcohol is a great cause of insanity.
22. Alcohol shortens life 500 per cent., according to the statistics of life insurance companies.
23. Alcohol annually kills one hundred thousand American citizens.
24. Alcohol costs more than bread.
25. Alcohol serves no useful purpose in the human system, and does inestimable harm.

Diphtheria.

As soon as the first symptoms of the disease appear, begin treatment in a very energetic manner. If the patient is an adult, give him a warm sitz bath for about twenty minutes. Surround him with blankets during the bath, so as to favor perspiration. The feet should be placed in a hot foot bath in the meantime, and the head should be frequently wet with cool water. After the bath, quickly sponge the whole body with water a little cooler than that of the bath. Then put the patient to bed and cover him up warm. Keep the feet warm, cool the head by frequent bathing, and sponge the whole body every hour or two with tepid water if the patient is very feverish.

If the patient is a child, a warm pack will be preferable to a sitz bath. Wring a woollen sheet out of water a little more than blood-warm. Spread it quickly upon the bed, place the patient upon it, and quickly envelop him. Then wrap him snugly with dry blankets and let him sleep for half an hour if he feels so inclined, as he usually will. Follow the pack by tepid sponging, as directed after the sitz bath.

After putting the patient to bed, apply, alternately, hot fomentations and cold compresses. Fold a flannel cloth twice, so as to give four thicknesses, wring it out of water as hot as can be borne dry enough so that it will not drip, and apply at once to the throat. After a lapse of three to five minutes, apply a cold compress for the same length of time. Then re-apply the fomentation, and continue to alternate until each has been applied four or five times. Then apply a cool compress, and change it as often as it becomes warm.

In ordinary cases, it will be sufficient to wet the cool compress in the coldest well water that can be obtained; but in cases in which there is great irritation of the throat, snow or pounded ice should be applied, being placed between the folds of the compress.

By all means avoid the use of all of those caustic applications which are so commonly employed in this disease. When white patches appear in the back part of the mouth, touch them every two or three hours with pure lemon juice, using a swab of soft linen or sponge attached to the end of a lead pencil or a small stick.

If the patient is old enough, some relief will be given by using a gargle of water acidulated with vinegar. Another excellent gargle which destroys the vegetable parasites always present in this disease is a solution of permanganate of potash. The crystals can be obtained of any druggist. Place two or three in a glass of water, and stir until they are dissolved. The fluid should not be taken into the stomach, though no harm will result if a few drops are swallowed.

A very favorite remedy with many physicians is the inhalation of the vapor of warm vinegar. The vinegar may be heated in a coffee-pot, and inhaled from the nozzle. A plan highly recommended is the inhalation of the vapor which arises when lime is slaked in a vessel. These measures will often give great relief.

The sick-room should be well ventilated, in order to carry away as rapidly as possible the foul germs which result from the disease, and thus prevent their re-absorption into the blood. The diet should be plain and light, though enough should be given to sustain the nutrition of the patient. Oatmeal gruel and mild fruits are usually well received. Milk may be employed when the patient has been accustomed to its use. The same regularity in meals should be observed as in health.

How the Ancients Ate.

Two or three thousand years ago, late suppers were not fashionable, as in the present degenerate age. The noble specimens of humanity of that day, whose deeds of valor and other wonderful achievements still inspire our respect, after a score of centuries, never formed the acquaintance of dyspepsia, that hydra-headed monster which renders miserable the lives of a large proportion of civilized human beings of the present day. This fact may fairly be attributed, in a great part, at least, to the simple dietetic habits of those pioneers of science, art, and civilization. Those noble Greeks who were the compeers and contemporaries of the great Hippocrates, the acknowledged father of medical literature, knew nothing of the elaborate courses, the infinite varieties, and the exquisite indigestibility of modern fashionable dinners. At that age of the world, man took but two meals a day, as do some at the present, a fact which is clearly stated in the writings of Hippocrates and other medical authors; from which it will be readily seen that in adopting the two-meal system one is but returning to the good old ways of his forefathers, rather than adopting any new or untried theory.

Which?—Was Diogenes a cannibal, or a vegetarian? He taught that it was as proper to eat the flesh of human beings as that of lower animals.

Diseased Milk.

PEOPLE are not generally aware of the dangers to which they are exposed in the use of milk from cows that are in a state of disease. The health of animals is affected by their food, just as is that of human beings. The same is true of all other hygienic conditions. A cow that is confined in a foul, close, dark, unventilated stable will suffer just as a human being would under the same circumstances. If the food is insufficient, or if it contains deleterious properties, it will injure the digestive organs of the animal, impoverish its blood, and occasion general deterioration of all its tissues. If it breathes impure air, and is deprived of sunlight, the excretions will be checked and its blood become foul, and the whole system will become filled with the products of disease. The milk of such an animal would not only be lacking in the elements of nutrition, but would

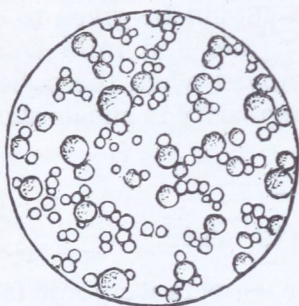


Fig. 1.

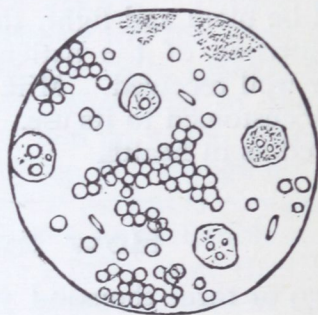


Fig. 2.

also be contaminated with the foul matter which should have found its way out of the system of the animal as excretions through the skin, kidneys, liver, and other eliminating organs. The milk of animals in this condition must certainly be a prolific source of disease. A writer of note truly says that "fully one-half of the deaths among the young are directly traceable to poisonous milk;" and yet thousands of people, especially in our large cities, are daily exposing themselves and their children to the possibility of fatal poisoning.

The taste is not always a reliable means for testing the quality of the milk, neither can the poisonous elements be detected by the closest scrutiny of the chemist; but the microscope reveals the presence of disease, although it may escape all other means of detection.

Fig. 1 is an accurate illustration of the appearance of pure milk when examined by means of a good microscope. It will be seen that it contains nothing but rounded globules of various sizes, which are the so-called butter cells of milk.

Fig. 2 is an exact representation of the appearance of diseased milk under the microscope. This specimen was taken from a cow that was fed upon swill and confined in a filthy stable. The differ-

ence between these two specimens will be readily observed. In Fig. 2, in addition to the rounded globules which are alone found in Fig. 1, we have great numbers of minute organisms which are indicative of disease. Milk of this kind cannot be habitually used without producing serious disturbances in the system.

Ague.

AGUE, or intermittent fever, is one of the most common of all diseases in malarious districts. It prevails especially in the spring and autumn months. The exciting cause of the disease is a certain poisonous miasm which rises from low lands which are alternately flooded and dried during the warm season.

Bilious or remittent fever is produced by the same cause. These diseases are so common that we need not describe their symptoms.

Prevention.—The following suggestions respecting prevention will be found useful:—

1. Unless compelled by dire necessity to do otherwise, do not live in a malarious district; in other words, seek a residence that is as remote as possible from localities where malaria is known to be produced.

2. If your residence is already fixed in a malarious district, employ every means possible to prevent the reception of the poison into the system and to counteract its effects. Avoid being in the vicinity of the malarious localities during the evening and early morning, since at these times the miasm settles near the ground. Secure, if possible, a dense growth of trees between the source of malaria and the residence; if this is impracticable, plant, every year, in the same place, a large area of sunflowers, which serve the purpose of destroying the miasm.

3. Keep the system in as free and clear a condition as possible by avoiding such habits and such articles of diet as will impair the integrity of the liver, skin, kidneys, lungs, and other eliminating organs. This will enable the system to eliminate the poison without its occasioning disease.

Treatment.—At the beginning of the disease, give the patient a vapor bath on the well day, and in case the chill occurs every other day, repeat the treatment on each well day for a week. During the chill, surround the patient with warm blankets, hot bricks, bed-warmers, a jug of hot water, or any other means of imparting artificial heat; but be careful to avoid applying water to the surface of the body, unless it be to the head. Care should be exercised to remove the hot applications as soon as the fever begins to appear. When the fever is at its height, sponge the body with tepid water. The sponging may be repeated at intervals while the fever continues.

During the sweating stage, frequently wipe the skin with a soft cloth; and when the sweating ceases, change the patient's clothing after a thorough sponging of the body. If there is tendency to sweat at night, administer the wet rubbing-sheet at bedtime. If the vapor bath cannot be given, the wet-sheet pack is a very good substitute.

The diet should be very simple. Oatmeal or graham gruel, with ripe fruit and dry toast or graham crackers, constitutes an admirable dietary for a person suffering with ague.

In case the chill occurs every day, the vapor bath or pack should be given in the afternoon or every other day after the paroxysm is past. If the severity of the disease is unabated after this treatment has been thoroughly applied for a week or ten days, it would be well to resort to direct means for breaking the periodicity of the disease. A very efficient means of doing this is to get the patient into a profuse sweat by surrounding him with hot bricks, warm blankets, and other hot applications, twenty minutes before the time for the chill to begin. The patient should be kept very warm for an hour or two, or until all danger of chilling is past. Care should be exercised not to press this means to such a degree as to produce violent congestion of the head. If this plan fails after two or three thorough trials, the use of a very small dose of an antiperiodic medicine will break the chills, and then the patient will make a rapid recovery; but the use of drugs will be very rarely required if treatment is applied efficiently and discreetly. The treatment described has proven successful in a large number of cases. When the cause of the disease is removed from the system, it will usually cease. But in case the paroxysms are not interrupted after the lapse of a reasonable amount of time, a small dose of medicine will do the system less harm than the prolongation of the disease; for the popular theory that it is better to wear out the disease than to check it in any way, is a great error. The long continuance of the disease is exceedingly damaging to the system, while it is in no way beneficial. In many instances, consumption, dropsy, and other grave and fatal diseases, are produced by allowing ague to continue until the vital forces of the patient are exhausted.

Cheerfulness at Meals.—The benefit derived from food taken, depends very much upon the condition of the body while eating. If taken in a moody, cross, or despairing condition of mind, digestion is slower and much less perfect than when taken with a cheerful disposition. The very rapid and silent eating too common among Americans, should be avoided, and some topic of interest introduced at meals, in which all may participate; and if a hearty laugh is occasionally indulged in, it will be all the better.

A Barbarous Practice.

THE practice of smoking, which has now become so universal among a large proportion of our male population, has a curious and interesting history—curious, on account of the novel origin of the habit, and interesting, from the insight which it gives into the depravity of human nature.

For a long time, the origin of smoking was obscure; but history has come to the rescue, and now we learn that “in 1492, as Columbus lay with his ships beside the island of Cuba, he sent two men to search the land and report what they might see. On their return, among other things, they said they saw the naked savages twist large leaves together, and smoke like devils.” Since that time, a large share of the men and boys of civilized nations have been following the filthy example of those naked savages.

It was not, however, without meeting with vigorous opposition that tobacco obtained despotic tyranny over human beings. In Russia, the use of tobacco was prohibited under the penalty of the bastinado for the first offense, loss of nose for the second, and deprivation of life for the third.

In Italy, the pope fulminated a bull against the filthy weed, and excommunicated all who used it in church.

In Switzerland, tobacco-users were treated as criminals.

The Shah of Persia made tobacco-using a capital crime, and many of its devotees were executed.

In Constantinople, a Turk was led through the streets with his nose slit and transfixed by a pipe-stem, as a warning to smokers.

King James I., of England, expressed his opposition to the weed in a powerful “Counterblaste,” which stigmatized the drug in most decided terms.

Even in this country, the native home of tobacco, at a somewhat later period its use was interdicted to all who had not previously acquired the habit, unless prescribed by a physician as a medicine.

But the devotees of this fascinating drug steadily increased in spite of all opposition, until tobacco-using has become an almost universal vice; in which fact we see a striking illustration of the readiness of human nature to seize upon anything which promises gratification of the senses, no matter how filthy, how disgusting, how pernicious, or how fatal in its ultimate consequences.

Diet and Mental Labor.—Isaac Newton performed his most severe intellectual labor while subsisting upon a diet of bread and water. Pythagoras, one of the most acute philosophers of antiquity, was a rigid vegetarian, and educated his followers in the same regimen.

Poisonous Sirups.

FOR a number of years the people of this country have been abused by the manufacture and sale of villainous compounds which were labeled with such enticing names as, "golden drip," "silver drip," and similar phrases. These so-called sirups, instead of being made from sugar or the sugar-cane, are manufactured by chemical processes, being made from starch, cotton rags, saw-dust, and similar materials.

It has long been known to chemists that a sweet substance, known as grape-sugar, could be produced by boiling starch for a long time with sulphuric acid. Saw-dust, cotton, and woody fiber in any other form, furnishes the same product when treated in a similar manner. Unscrupulous knaves have taken advantage of this scientific fact to impose upon the people a spurious kind of sirup. These unrighteous practices have become so extensive that it is next to impossible to find a specimen of sirup that is wholly free from contamination.

The effects of using this chemical preparation are very serious. It contains sulphuric acid, or oil of vitriol, iron, and various other unwholesome constituents. When freely used, it produces irritation of the stomach, and it has, no doubt, been the cause of numberless cases of chronic dyspepsia. In one instance which occurred under our observation, more than a dozen people suffered at once with slight symptoms of poisoning, the consequence of eating candy made of this wretched stuff. It was observed that the teeth and tongues of those who ate of the candy were made very black; and without doubt the blackened teeth were permanently and seriously damaged.

It is important to know how to distinguish these adulterated and poisonous sirups from those which are pure. A convenient method, which is sufficiently accurate for practical purposes, is to add a teaspoonful of the suspected sirup to a half cup of strong tea. If the solution becomes black, like ink, the sirup is unfit for use and contains poisonous elements. It should certainly be discarded. If every family would adopt the plan of testing sirup before buying, and refuse to purchase that which would not stand the test, the market for the vile compound would soon be destroyed, and its manufacture would necessarily cease.

House-Plants.—The general supposition that house-plants are injurious in the sick-room has no foundation. Thriving house-plants will do much toward purifying the atmosphere of a room, as well as beautifying it and cheering the spirits of the occupants. In the sick-room, growing plants will do much to cheer the invalid, inspire hope and courage, and attract his attention from himself. Every family

ought to have a collection of house-plants proportionate to their means; even a very few plants are better than none, and quite a collection may be made at a very slight expense. A few seeds and slips may be obtained from a florist for a trifle, while empty oyster cans, small paint kegs, and even broken dishes, may be made to answer the place of pots, in the absence of anything better.

How to Cure a Sprain.

A **SPRAIN** is an injury to a joint, produced by straining or lacerating one or more of the ligaments connected with a joint. The first thing to be done after the receipt of the injury is to apply hot fomentations to the injured joint; and the sooner the better. After applying hot fomentations for one or two hours or longer, if the pain continues, apply cold compresses and keep the joint entirely at rest. When there is much swelling, alternating it with cold pouring, continued for an hour at a time, will often give great relief. Rest is one of the most essential features of treatment, since the injured ligaments cannot be repaired while disturbed by the motion of the joint. Cases are numerous in which an injury which was at first a slight sprain has resulted in the total loss of the use of the limb, from neglect to give the joint the required rest while nature was effecting a repair. The various liniments which have a reputation for the cure of sprains are useful only as a means of inducing the patient to rub and manipulate the joint. Rubbing is a very useful means of treatment, especially if the limb is considerably swollen. Violent manipulation of the joint should be carefully avoided, as it would only serve to increase inflammation.

Killed by Kindness.

DR. LANKESTER, coroner of the city of London, states that three thousand young infants are annually smothered to death by their mothers, who fall asleep while nursing their children in bed.

It is quite startling that so many human beings should perish in this manner; and yet, those who thus end their existence are few compared with the multitudes of children who are killed by the mistaken kindness of their ignorant mothers, as shown by absurd indulgence in diet, by foolish exposure in dressing, and by various other violations of the plainest laws of nature. It is, indeed, wonderful that the human race, or at least the civilized portion, were not long ago exterminated. Babies are called tender; but from the hardships which they undergo they may be justly regarded as being remarkably tough.

The Tobacco Waste.

THE following facts will give something of an idea of the enormous waste occasioned by tobacco, in its raising and using, at the present time:—

In 1858, tobacco cost England more than \$40,000,000. In the year 1860, it cost France the same sum. In 1873, it is estimated that tobacco cost England more than bread. The United States annually exhausts in the culture of tobacco, 400,000 acres of its richest soil, and employs 40,000 men, women, boys, and girls in its manufacture. In 1842, the amount of tobacco used in this country amounted to seven pounds for each adult person. Holland has 1,000,000 sallow, cadaverous-looking people engaged in the manufacture of the various forms of tobacco.

The present annual production of the world is estimated by reliable authorities at 1,000,000,000 lbs., which must cost the consumers at least \$500,000,000.

Facts about Salt.

IT is a general supposition that salt is indispensable as an article of diet. Many people suppose that life cannot be sustained without it; nevertheless, there are numerous facts which indicate that this popular supposition is erroneous. The following are a few of the many that might be presented:—

1. *Salt is a mineral.* It is a well-established fact that animal life cannot be sustained by the use of inorganic or mineral substances as food. Vegetables subsist upon inorganic matter, while animals require organized matter for their food.

2. *Salt is an irritant.* And when taken into the system it produces irritating effects. This is indicated by dryness of the throat, and acceleration of the pulse.

3. *When taken into the system it is not used,* being expelled, unchanged, by the liver, kidneys, skin, and other depurating organs.

4. *It is an antiseptic.* And when taken in any considerable quantities it greatly interferes with digestion.

5. *It is not necessary to support animal life,* as shown by the fact that its use is confined to a very small minority of the animal kingdom.

6. *It is not necessary to sustain human life,* as is conclusively shown by several facts: *a.* Scores of people who have been accustomed to its use have wholly discarded it, not only without detriment to their health, but with positive improvement. *b.* Millions of human beings in Central and Southern Africa, in South America, in some portions of North America, in Siberia, and in other parts of the world, subsist entirely without salt. *c.* This is not altogether

because salt cannot be obtained ; for in Southern Africa, where salt abounds, neither human beings nor lower animals make any use of it whatever.

We would not recommend that salt should be wholly discarded in all cases ; but there can be no doubt that many cases of diseases of the stomach and liver originate in the excessive use of salt. Persons suffering with torpid livers will find great benefit by abstaining almost wholly from its use, together with that of other condiments.

Effect of Diet on the Liver.

ALMOST every other man we meet is complaining about his liver. One has a "torpid" liver ; another has "congestion" of the liver ; another has a pain in his side, which he is confident is due to disturbance of his liver. Complaints are loud and general against the liver, but no one thinks of entering a complaint against the diet, which is the real source of difficulty. Careful investigation and examination of the liver, after death, have proven the deleterious effect which certain articles of food have upon the liver.

The drunkard's liver becomes hardened by the alcohol which he imbibes. The liquid poison has the same damaging effect upon his brain.

The livers of people who use a great deal of fat—fat meat, butter, lard, rich cakes, pies, etc.—become infiltrated with fat. They undergo a process called fatty degeneration, in which there is an actual change of the tissue to fat. This change is favored by sedentary habits. The liver of the domestic cat is almost always fatty.

The natives of the East Indies, as well as of Central and Southern Africa, together with Mexico and other warm climates, make great use of pepper, mustard, turmeric, and other irritating spices. The result of this practice is not only derangement of the stomach, but the production of induration of the liver, a disease which was formerly attributed to the climate of those regions, on account of its prevalence, but is now well known to be the result of the use of the deleterious articles named. Lovers of pepper and mustard should look out for their livers.

It has been observed that cattle that have been overfed, or fed on warm slops, have badly diseased livers. The organ is found enlarged, in some cases very greatly, and its surface is covered with red spots and ragged, ulcerated patches, indicating the presence of disease of so extensive a character as to render the organ almost wholly useless.

The same causes which produce these grave effects in savage and semi-civilized human beings, and in lower animals, will produce the same results in civilized beings. Pepper and mustard are no better

for a New York City gormand than for a Hottentot or a Mexican Indian. Slop food—highly seasoned soups, gravies, and “rich” sauces—will work for human livers the same mischievous results that follow its use by lower animals.

How to Treat a Hangnail.

THIS very distressing difficulty may be easily cured by proper attention. A remedy which we once tried is as efficient as it is simple. If the toe is greatly inflamed, it should be placed in a warm foot bath, an hour at a time, three times a day. During the intervals, it should be covered with a poultice made of bread and milk, linseed, or slippery elm. By this means, the inflammation and tenderness will be greatly reduced. The next step in treatment should be to scrape the center of the nail with a sharp knife until it becomes as thin as possible without exposing the flesh. Then slightly elevate the outer edge of the hangnail for the purpose, and place underneath it delicate pledgets of cotton. If the nail penetrates the flesh so deeply as to make this impossible, it may be necessary to remove a very small portion by splitting it off with a sharp knife. A still better way is to crowd underneath the diseased portion of the nail delicate filaments of floss-silk, drawing in one portion after another until the nail is elevated out of the tender flesh. The nail may be still farther elevated by the employment of the same means, while the poultices are continued, till a complete and permanent cure is effected.

Little Women.

It would be quite incorrect to say that American women are smaller than are the women of any other nation, and yet it has become a matter of general remark that there is a greater difference in size between American men and American women than between men and women of any other nation. Strange as this fact may seem, it can readily be accounted for. Physical development is the result of physical exercise. Women and girls of this country live, for the most part, sedentary lives. They have no adequate physical exercise; consequently, their development is also inferior. In addition, the great organs of nutrition, the lungs, the stomach, and the liver, upon which development chiefly depends, are disabled by the corset, and other improper methods of dressing.

If we add to this the injurious effects resulting from breathing impure air and living in damp, ill-lighted apartments, we have a sufficient cause for the deficiency in physical development which is characteristic of American women.

Corns.

PERHAPS no human malady is more trying to the patience than a sensitive corn. Corns are excrescences produced by a morbid growth of the skin. They are caused either by friction or by pressure, and are usually the result of wearing a tight and otherwise ill-fitting boot or shoe. Corns are not always produced by tight shoes or boots, being often occasioned by the friction of loosely fitting foot-gear.

There are two varieties of corns, hard and soft. Hard corns are formed upon the outside of the toes ; soft corns are produced between the toes.

To cure a corn, the first thing to be done is to soften it. To accomplish this, soak the foot in hot water for one hour every night, and then apply a cloth saturated with a strong solution of saleratus. Continue this treatment for three or four days ; then remove the corn with a thin, sharp-bladed knife, carefully working the instrument between the corn and the healthy skin beneath. If the whole corn has been removed, all that now remains to be done is to protect the part from pressure. This may be very easily accomplished by placing over it a piece of soft buckskin, in which an opening has been made of the exact size of the corn, which should be placed exactly over the seat of the disease. By this simple means, the diseased surface will be wholly protected from pressure. Any tendency to harden will be prevented by keeping the buckskin saturated with sweet-oil. This simple treatment, if thoroughly applied, will rarely fail to cure any corn.

Nutriment in Lager Beer.

AFTER such repeated refutations of the idea, it is strange that people should still cling to the notion that lager beer is nourishing. If a man has lost his appetite, and seems to be failing in strength, or losing weight, his next-door neighbor advises him to drink daily a few glasses of lager beer. If a nursing mother has insufficient food for her infant, wise old ladies prescribe lager beer or ale.

Although it is being constantly reiterated in the ears of the people that alcohol is not food, and that beer and ale are only dirty mixtures of alcohol and water, still they refuse to believe that these pernicious beverages cannot, in some way, impart nourishment and strength. Perhaps the testimony of one of the greatest of European savants will correct the opinions of a few.

Said Prof. Baron Liebig, a German chemist of great renown, "We can prove with mathematical certainty that as much flour or meal as would lie on the point of a table-knife is more nutritious than five measures [ten quarts] of the best Bavarian beer." Powerful nutriment, indeed !

Beware of Quacks!

ONE of the phenomenal manifestations of human nature which is the most difficult for us to reconcile with human intelligence, is the readiness with which men and women of good judgment in matters of general interest will place their lives in the hands of men of whose ability or qualifications as physicians they have not the slightest assurance except the arrogant assumptions of the individuals themselves. No man of average sense would think of trusting his property in so reckless a manner. Before reposing trust in an individual, he would ascertain with the greatest care all about his integrity and financial standing; and even then he would require ample security against possible loss. But when life and health are at stake, interests of infinitely greater value than any monetary consideration, men who are in all other matters shrewd and cautious show the most reckless indifference to all precautionary considerations.

The almost universal prevalence of this lack of caution is the source of immense revenue to quacks and charlatans of every description. It is this which leads people to place themselves in the hands of traveling knaves who are as ignorant of the mysteries of the human system as of the subtleties of the differential calculus. These self-styled "doctors" are as unscrupulous as ignorant. They have no reputation to lose, and care only to enrich their pockets. The single fact that they are "traveling doctors," with no settled residence, is ample evidence of their incapacity and unreliability.

Beware of persons who advertise secret remedies. This fact alone is ample evidence of their unreliability; for no honorable member of the profession will withhold from the public any means which he knows to be of real utility in relieving human suffering. Such a course is contrary to the accepted code of ethics of the regular profession; and any member of the regular profession who violates not only the code of ethics but every principle of philanthropy and morality is in so doing at once ostracized from the society of reputable physicians as a man unfit to bear the grave responsibilities of the physician, and unworthy of the confidence of his fellow-men. Again we say, *Beware of quacks!*

Discouraging to Smokers.—Dr. Lawson, late surgeon general of the United States army, says he often observed that when the wolves and buzzards came upon the battle-fields to devour the slain, they would not disturb the bodies of those who had chewed or smoked tobacco until they had consumed all the others among them. And yet there are thousands of presumptuous young chewers and smokers who expect that refined young ladies will be willing to love and cherish all their lives what even buzzards will reject as nauseating and unwholesome.

Things Worth Knowing.

Duration of Life.—The following table is condensed from one prepared by Dr. Farr, F. R. S., at the English General Register Office. It proves that many more people attain to the age of one hundred years than is generally supposed. According to Dr. Farr's researches, the average length of life is, of males, 39.91 years; of females, 41.85 years.

AGE.	NUMBER.	MALES.	FEMALES.	TOTAL NO. DEATHS EACH YEAR.
0	1,000,000	511,745	488,255	149,493
5	736,818	370,358	366,460	9,899
10	702,509	353,031	349,478	4,028
15	684,563	344,290	340,273	3,669
20	662,750	333,608	329,142	5,583
40	538,584	272,073	266,511	6,931
60	369,827	182,350	187,477	11,338
70	237,977	114,370	123,607	15,184
80	90,133	41,115	49,018	12,214
90	11,509	4,770	6,739	2,933
95	2,153	833	1,320	713
100	223	79	144	92
101	131	46	85	57
102	74	25	49	33
103	41	14	27	19
104	22	7	15	10
105	12	4	8	6
106	6	2	4	3
107	3	1	2	2
108	1	0	1	1

Freezing Mixture.—The following are a few of the best known means for producing artificial cold:—

1. Mix 4 ozs. of saltpeter and 4 ozs. of sal ammoniac, each finely pulverized, with half a pint of water.

2. Mix equal parts of powdered nitrate of ammonium, carbonate of sodium, and water.

3. Mix quickly together two parts of finely powdered ice or snow with one part of salt. This mixture will produce a temperature of 4° below zero.

The article to be frozen should be surrounded by the freezing mixture as quickly as possible after the preparation of the latter. When it is a liquid, it may be contained in a bottle which can be quickly broken after the freezing is effected, if necessary.

Banking the House.—People who have cool houses usually throw up around the sides, on the approach of cold weather, an embankment of some kind. Sometimes earth is used; but very often, especially in the country, stable manure is employed. The latter practice is a very objectionable one. During the cold-est months, when everything above ground, out-of-doors, is frozen up, no harm may result. But the first warm days of spring, or perhaps a "January thaw," restores the putrescent mass to its native condition, and then foul odors and poisonous effluvia are poured into the dwelling from all sides. The proper way

to bank a house is to place about it a sufficient quantity of straw, hay, or leaves, and then cover with dry earth to the depth of a few inches. Even such a banking as this should be removed as early as possible in the spring, to give light and ventilation to the cellar.

The Bushel.—Weight is the only proper standard for the bushel, being the only accurate one. The following are the standards of weight fixed by the Wisconsin Legislature, for the most common articles of commercial exchange :—

Pounds.	Pounds.
Wheat,..... 60	Dried apples,..... 57
Shelled corn,..... 56	Dried peaches,..... 28
Ear corn,..... 70	Coarse salt,..... 50
Oats,..... 32	Fine salt,..... 56
Rye,..... 56	Lime (unslaked) 80
Buckwheat,..... 50	Irish potatoes,..... 60
Barley,..... 48	Sweet potatoes,..... 55
Corn-meal, 48	White beans,..... 60
Bran,..... 20	Castor beans,..... 46
Clover seed,..... 60	Beets,..... 50
Timothy seed,..... 45	Parsnips,..... 44
Flax seed,..... 56	Carrots, 50
Hemp seed,..... 44	Onions,..... 50
Blue-grass seed,..... 14	Turnips,..... 42
Green apples, 57	Rutabagas,..... 56

To Remove Potato Sprouts.—In the spring of the year, potatoes which are kept in a damp cellar lose a large share of their nourishing properties by the growth of new shoots or sprouts. It is not generally known that these shoots are injurious to health ; but chemical analysis shows that they contain a deadly poison, which may be the cause of a grave or fatal sickness, if received into the system. Hence the importance of the careful removal from the potatoes before cooking them of every vestige of new growth which has appeared. A convenient way to do this is the following :—

Place the potatoes in barrels, about one bushel in each barrel. Tilt the barrel upon its edge, and roll it about with sufficient vigor to give the potatoes a thorough shaking. By this means the sprouts will be broken off ; and by the repetition of the process once in a week or two, the potatoes may be kept free from young shoots.

Bedbug Trap.—Every one is accustomed to catching rats and mice, together with larger vermin, by means of traps ; but the idea of taking bedbugs in this way may be somewhat novel. Nevertheless, it can be done very successfully, thus : Take a pine board one inch thick, about six inches wide and two or three feet in length, and make in it, with a gimlet of ordinary size, a large number of holes. Place this just beneath the mattress of the bed, and leave it undisturbed for a day or two. Remove it in the morning, and plunge it quickly into boiling water. This will be found a very efficient way of ridding a bed of these detestable vermin. At the same time that the trap is being employed, a strong solution of corrosive sublimate should be applied to every crevice or possible hiding place for the bugs about the bed or room.

Coal-Tar for Fence-Posts.—Coal-tar is an excellent preservative for fence-posts, if properly used. It should not be used alone, since it contains acids which are destructive to the wood ; but when combined with quicklime it becomes a most effective preservative. Mix half a bushel of quicklime with a few gallons of water, and thoroughly mingle it with a barrel of coal-tar. Apply freely to the portion of the post which is to be in contact with the earth.

Uses for Ashes.—There is no more valuable fertilizer than common wood ashes; but in order that they should retain their virtue, they should be kept under cover. Ashes which have been leached have very little value.

Ashes are also valuable for disinfecting purposes. They are even better than dry earth for deodorizing animal excreta. A privy may be kept entirely free from foul odors by their liberal use. When employed in this way, their disinfecting and fertilizing properties are both utilized.

Another use for ashes which the farmers would do well to take advantage of, is due to their power of destroying various kinds of insects. Turnips and cabbages may be protected from the ravages of various insects which feed upon them, by sprinkling upon and around them a few ashes daily, for a short time. A practical farmer also asserts that unleached wood ashes will permanently destroy potato bugs, if sprinkled upon the vines while they are moist with dew, or immediately after a rain.

Beef Tea.—Although not to be recommended as an article of diet, beef tea is frequently a valuable article of food for the sick, especially if properly made. Pound and cut the beef until it is reduced to a pulp, then place it in a dish and cover it with a very little cold water. Allow it to steep gently for two hours, then strain off the juice, and it is ready for use. Some tastes will require the addition of a minute quantity of salt. One-half pound of beef is required for a pint of tea. A very excellent plan is to place the beef in a bottle with the water, and then place the bottle in a kettle of cold water, which should be gradually brought to the boiling point.

Disinfecting Fluid.—The following is a recipe for one of the cheapest and most efficient disinfective fluids known:—

Heat two pounds of copperas in an old kettle for half an hour, stirring frequently. When cold, dissolve the copperas in two gallons of water. Add two ounces of carbolic acid, and mix well together. A pint of this solution poured into the kitchen sink every few days will keep it free from odors. It will also be found very useful for disinfecting the discharges of typhoid-fever patients, for which purpose a little should be kept in the vessel constantly. Even privy vaults can be kept in a comparatively harmless condition by the liberal use of this solution.

To Ascertain the Weight of Hay.—It is often necessary for the farmer to estimate a quantity of hay without the aid of scales. Here is a convenient method: Find the cubic contents of the stack in feet. Divide by 27, to find the number of cubic yards. A cubic yard of old hay in the stack weighs about 200 lbs. New hay weighs about two-thirds as much. The weight is readily ascertained by multiplying the number of cubic yards by the weight of a single yard.

Removing Substances from the Ear.—The *Medical Recorder* gives the following as an excellent plan: Take a horse-hair about six inches long, and double it so as to make a loop at one end. Introduce this loop as deeply as possible into the ear, and twist it gently around. After turning it two or three times, draw out the loop. The foreign body will usually come away with it.

Barley-Water.—This is a very valuable article of diet for the sick, and is especially serviceable in cases of indigestion or intestinal disturbances in children. Children who are fed upon cows' milk will do much better if a considerable portion of barley-water is added to their food. It is not only a complete

substitute for lime-water, but is in all respects far preferable, since it can do no harm as a chemical agent, and has considerable nutritive value. It should be made as follows: Boil two table-spoonfuls or best pearl barley in a quart of water for two hours, and strain through a fine cloth.

Best Paste.—Dissolve in a sufficient quantity of water, one-half ounce each of sugar of lead and alum. Mix into a thick paste a half pint of wheat flour with very thin mucilage. Place the paste upon the stove and add the solution of lead and alum. Stir well, and remove from the stove as soon as it begins to boil. As soon as it is cold, it is ready for use. It may be thinned, when necessary, by the addition of a little gum-water.

Water-proof Paper.—A paper which is impervious to both water and oil, as well as transparent, may be prepared as follows: Dissolve in half a pint of water as much borax as will remain in solution. Then add two ounces pulverized shellac, and heat gently until the latter is dissolved. Dip the sheets of paper into this solution, one at a time, carefully hanging each to dry by itself, suspended by one corner.

To Ascertain the Weight of Cattle.—Measure the girth close behind the shoulder, and the length from the fore part of the shoulder-blade along the back to the bone at the tail which is in a vertical line with the buttock, both in feet. Multiply the square of the girth, expressed in feet, by five times the length. Two-thirds of the product will be the weight of the four quarters in pounds. For very fat cattle, add one-twentieth more. For very lean ones, subtract one-twentieth from the amount obtained by the rule.

Postal Laws.

MAILABLE MATTER.—There are three classes of mailable matter.

First-class consists of letters and all written matter except book manuscript, corrected proof-sheets, postal cards, and local or drop letters.

Second-class consists of publications regularly mailed.

Third-class embraces tracts, pamphlets, books, book manuscript, and proofs, occasional or transient publications, and all miscellaneous matter.

Packages containing liquids, poisons, explosive chemicals, or glass, cannot be sent by mail. Anything of an obscene, vulgar, or disloyal character is also unmailable.

No package to be sent by mail can exceed four pounds in weight.

RATES OF POSTAGE.—*First-class* matter, including ordinary letters, for each one-half ounce, or fraction thereof, to any part of the United States or Territories, and Canada, 3 cents; to England, Ireland, Scotland, Switzerland, Sweden, Norway, Denmark, Belgium, Holland, Germany, Austria, Russia, Poland, Turkey, Portugal, Egypt, Australia, (direct), Shanghai (direct), Greenland, Iceland, Greece, Italy, and West Indies, 5 cents; to Newfoundland and Sandwich Islands, 6 cents; to France, 9 cents; to China (direct) and Mexico, 10 cents; to Spain, New Zealand, and New South Wales, 12 cents; to Africa, Morocco, Japan (direct), Brazil (direct), 15 cents; to India, 17 cents.

Second-class matter must be prepaid by the publishers.

Third-class matter, with the exception of printed matter, is sent at the rate of 1 cent for every ounce or fraction thereof to any part of the United States or Territories. Special rates to other countries. This class of matter must be unsealed, and must contain no writing.

The new postal law allows *printed matter* of the third class to be sent at the rate of 1 cent for every two ounces or fraction thereof.

Postal cards and printed matter may be sent to Canada at domestic rates, and to England by the addition of a 1-cent stamp. Postal cards require letter postage if more than the address is written on the face.

Drop or local letters require 1 cent postage; if delivered by carrier, 2 cents.

Letters are not forwarded if postage is unpaid.

HEALTH PUBLICATIONS.

The Uses of Water in Health and Disease. A convenient manual for the various methods of applying water. Water is not presented as a panacea, neither is its use advocated as a specialty. It is recommended only as one of the most useful of all remedial agents, the use of which should be thoroughly understood by every one who has any responsibility respecting the health of human beings. A copy of the work should be in every household. Neatly bound in cloth, 160 pp., price, 60 cents. In paper covers, 136 pp., price, 25 cents.

Plain Facts about Sexual Life. A book for the times, treating upon all subjects pertaining to the anatomy and physiology of reproduction. It should be read by everybody. Hundreds who have read the book pronounce it invaluable. Many physicians and clergymen have given it most unqualified commendation. The following are a few extracts from notices of the press: "A great deal of crime and wretchedness would be spared if the principles laid down in this volume were even approximated in the life of the people."—*Boston Journal*. "The volume contains a vast amount of information of great value to all, especially to the youth of this country, of both sexes."—*Haverhill (Mass.) Publisher*. "It is a book well calculated to impart useful knowledge on very important subjects."—*Boston Herald*. Tinted paper, handsomely bound, 360 pp., price, \$1.50. In flexible covers, 260 pp., 75 cents.

The Household Manual. A work containing a great amount of practical information upon a hundred subjects useful to every household. It contains instruction relating to domestic hygiene, foods and drinks, the treatment of common diseases, accidents and emergencies, etc. Bound in cloth, 330 pp., price, \$1.00.

The Physical, Moral, and Social Effects of Alcoholic Poison as a Beverage and as a Medicine. This work defines true temperance, describes the physical effects of alcohol upon the human body, etc. Temperance workers will find the work a valuable aid. Bound in enamel paper covers, 128 pp., price, 25 cents.

Healthful Cookery. A Hand-Book of Food and Diet; or, What to Eat, When to Eat, and How to Eat. It contains a large number of recipes for the preparation of wholesome and palatable food without condiments. Enamel paper covers, 128 pp., price, 25 cents.

Proper Diet for Man. The object of this work is to present a concise summary of the principal evidences which can be drawn from anatomy, physiology, and experience, in support of a vegetarian diet. Paper covers, 48 pp., price, 15 cents.

The Evils of Fashionable Dress, and How to Dress Healthfully. This little work ought to be circulated everywhere. Thousands of American ladies are entailing upon themselves life-

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Health and Temperance Tracts.

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Alcohol: What is it? The question is answered by a description of the chemical and physical properties of alcohol, and the mode of its production. 4 pp., price, ½ cent.

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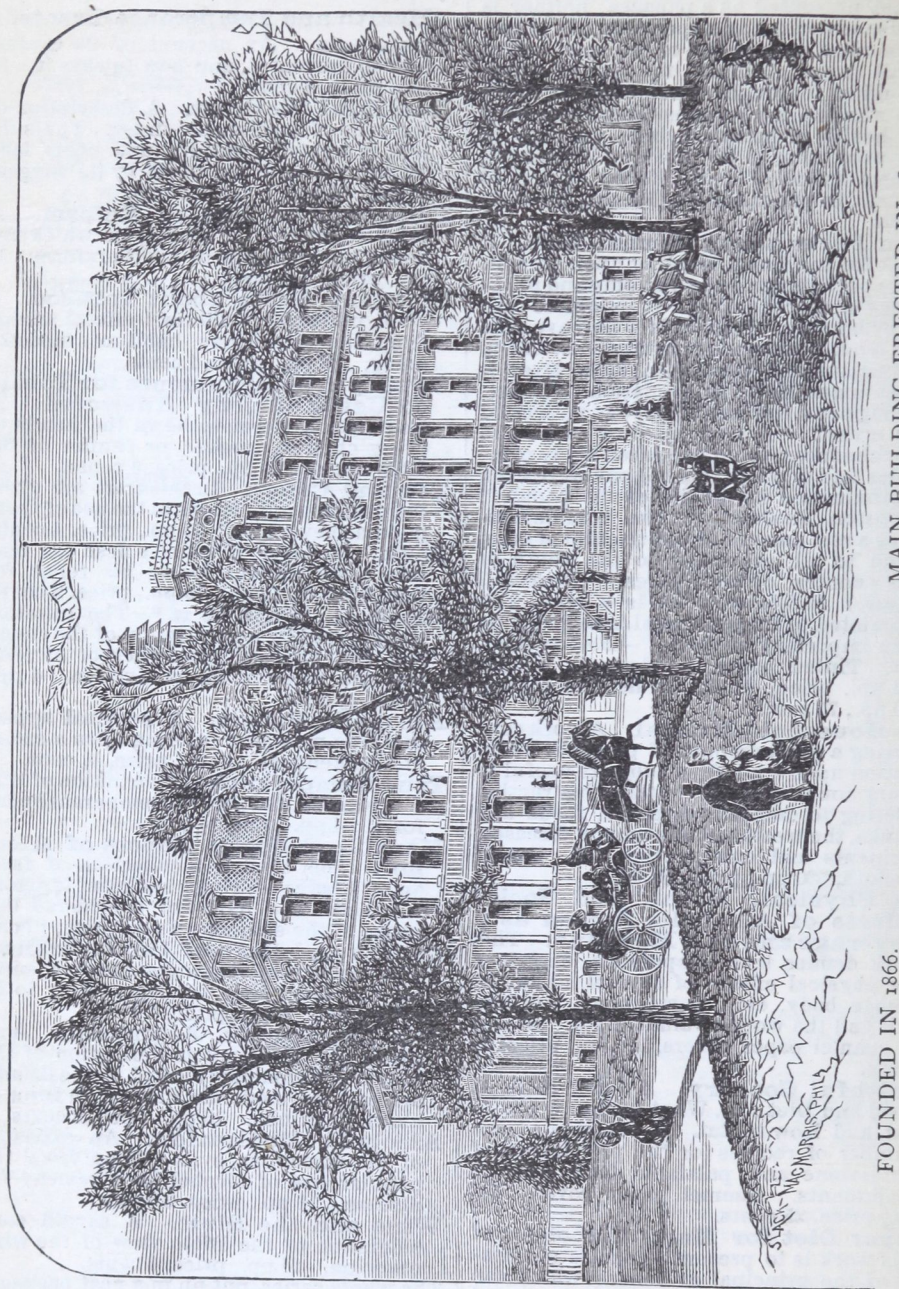
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The whole series, put up in a neat package. 250 pp., price, 30 cents.

The tracts will be furnished at the rate of 800 pages for \$1.00. A liberal discount will be made to missionary and temperance societies.

Address, **Health Reformer,**
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MAIN BUILDING ERECTED IN 1877.

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Medical and Surgical **SANITARIUM.**

This is one of the most popular institutions of the kind in the United States. It possesses many points of superiority over all others.

LOCATION.—The Institution is finely located in the suburbs of a beautiful little city in Central Michigan. Its elevated site secures to it, not only pure air and entire freedom from malarial influence, but most delightful scenery.

METHODS.—The Institution is in no sense a water-cure. No specialty is relied upon exclusively. All remedies of established value are employed. In addition to ordinary remedial agents, constant use is made of

Electricity, Swedish Movements, The Health-Lift, Turkish and Russian Baths, together with all other Forms of Bath.

FACILITIES.—This Institution undoubtedly possesses the most perfect facilities for thorough and scientific treatment of the sick afforded by any institution in the United States. Its buildings are commodious and pleasant, and are warmed and ventilated by the most

Perfect System of Heating and Ventilating

ever devised. Every room is supplied with pure, steam-heated air. New apparatus has been devised and added at considerable expense, to secure perfect regulation of the moisture as well as the temperature of the air. By this means,

INVALIDS CAN SECURE ANY CLIMATE,

From the warm, moist air of Florida, with its soft, relaxing, and soothing influence, to the cool, dry, invigorating atmosphere of Colorado.

In addition to the new main building shown upon the opposite page, which will be ready for occupancy Jan. 1, 1878, the buildings of the Sanitarium comprise another main building, with ten fine cottages. In the new building every room is supplied with hot and cold water, gas, and all modern conveniences. An abundant supply of water gives a fine opportunity for in-door water-closets, thus obviating all necessity for out-of-door exposure during the inclement season of the year.

The bath-rooms are, undoubtedly, the finest in the world for the purposes of an institution of this sort. They supply facilities for the administration of every form of bath in the best possible manner.

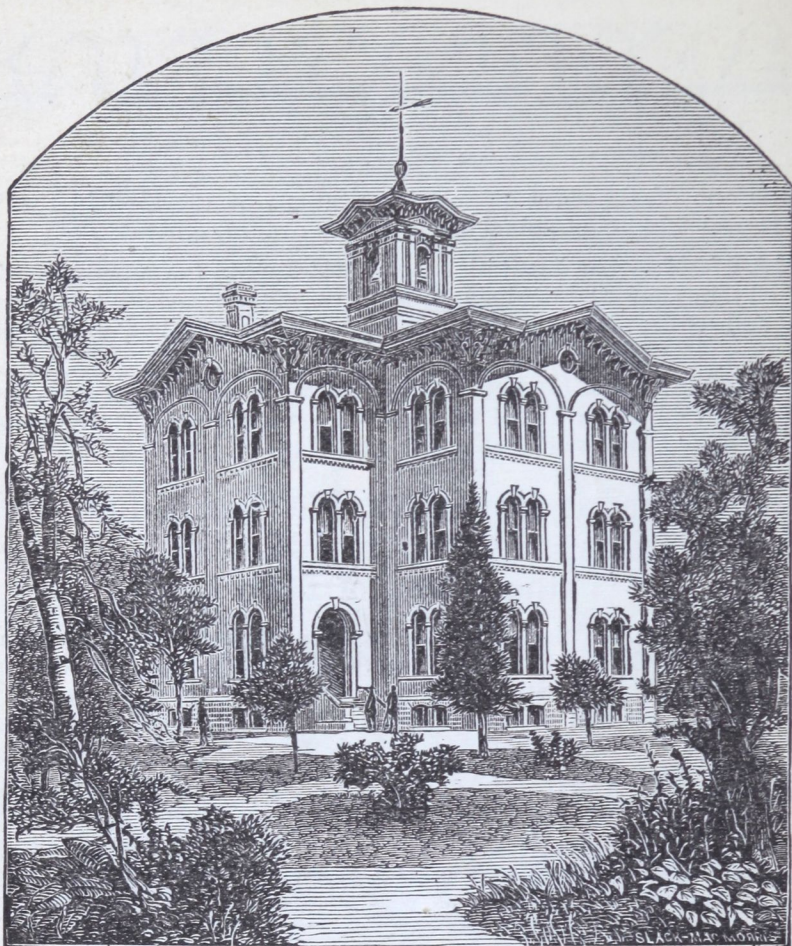
The medical corps of the institution are all regularly educated physicians in good standing. Those desiring further information should

SEND FOR CIRCULAR.

Address, **SANITARIUM, Battle Creek, Mich.**

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BATTLE CREEK COLLEGE.



This Institution of learning has met with almost unparalleled success since its organization in the fall of 1874. Its attendance already nearly equals that of any other college in the State, and large accessions of numbers are made each term. The College building is **AMPLE** and **ELEGANT**, and the grounds are **SPACIOUS** and **BEAUTIFUL**. Ample facilities are provided for instruction in all the branches included in the curriculum of study, which embraces all the English Studies, the Natural Sciences, with both Ancient and Modern Languages. An annual course of

Lectures on Physiology and Hygiene,

makes hygienic education a prominent feature of the school.

ADVANTAGES.—Few institutions of learning can offer so many advantages for securing a thorough, practical education as are offered at this. The instructors are all men and women of experience, who are thoroughly competent for their work. A degree of thoroughness is here attained which is rarely equaled.

INFLUENCES.—The class of students who patronize the institution are young men and women of unexceptionable worth. Their object is a thorough education, and they have no time for frivolity. Students are surrounded with a strong moral, though unsectarian, influence, and most rigid discipline is maintained.

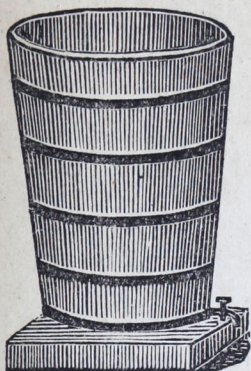
EXPENSE.—Probably there is no other college in the United States where a thorough education can be obtained at so small an expense. A system of clubbing, which has become very popular among students, enables them to secure excellent board for one dollar a week, exclusive of lodging, which costs from fifty cents to one dollar more.

TERMS.—Rates of tuition are very reasonable. Scholarships can be obtained which still further reduce the expense.

For further information send for the Annual Catalogue. ADDRESS,

BATTLE CREEK COLLEGE, Battle Creek, Mich.

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THE accompanying cut is a representation of one of the greatest and most useful inventions of the age—*Kedzie's Improved Water Filter*.

Its mechanism is so perfect that it accomplishes all that could be expected or desired of a filter to accomplish, and without the bestowal of more than the slightest amount of attention. It removes from water all those products of decay and disease which are the most prolific causes of sickness and death.

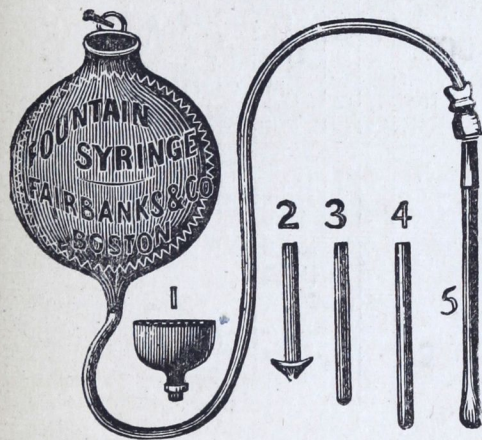
Thousands Use Them, and admire them, and all are ready to testify to their efficiency and utility. No family should be without one; for it is impossible to obtain from springs or wells water which is, in all respects, so free from injurious properties as is soft filtered water.

Five sizes are manufactured to suit the wants of all. The following table gives their dimensions and the price of each:—

No. 1,—25 inches high, reservoir holds 2 gallons, price,	\$ 9.00.
No. 2,—27 “ “ “ “ 2½ “ “	10.50.
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JAN.	1	2	3	4	5	JULY	...	1	2	3	4	5	6
	6	7	8	9	10	11	12		7	8	9	10	11	12	13
	13	14	15	16	17	18	19		14	15	16	17	18	19	20
	20	21	22	23	24	25	26		21	22	23	24	25	26	27
	27	28	29	30	31	...	...		28	29	30	31	...	...	...
FEB	...	...	...	...	...	1	2	AUG.	...	...	...	...	1	2	3
	3	4	5	6	7	8	9		4	5	6	7	8	9	10
	10	11	12	13	14	15	16		11	12	13	14	15	16	17
	17	18	19	20	21	22	23		18	19	20	21	22	23	24
	24	25	26	27	28	...	...		25	26	27	28	29	30	31
MAR.	...	...	...	...	...	1	2	SEP.	...	...	...	...	...	...	...
	3	4	5	6	7	8	9		1	2	3	4	5	6	7
	10	11	12	13	14	15	16		8	9	10	11	12	13	14
	17	18	19	20	21	22	23		15	16	17	18	19	20	21
	24	25	26	27	28	29	30		22	23	24	25	26	27	28
	31	...	...	...	...	...	...		29	30	...	...	...	...	...
APR.	...	1	2	3	4	5	6	OCT.	...	...	1	2	3	4	5
	7	8	9	10	11	12	13		6	7	8	9	10	11	12
	14	15	16	17	18	19	20		13	14	15	16	17	18	19
	21	22	23	24	25	26	27		20	21	22	23	24	25	26
	28	29	30	...	...	...	...		27	28	29	30	31	...	...
MAY	...	...	...	1	2	3	4	NOV.	...	...	...	...	...	1	2
	5	6	7	8	9	10	11		3	4	5	6	7	8	9
	12	13	14	15	16	17	18		10	11	12	13	14	15	16
	19	20	21	22	23	24	25		17	18	19	20	21	22	23
	26	27	28	29	30	31	...		24	25	26	27	28	29	30
JUNE	...	...	...	...	...	...	1	DEC.	...	...	...	...	...	...	...
	2	3	4	5	6	7	8		1	2	3	4	5	6	7
	9	10	11	12	13	14	15		8	9	10	11	12	13	14
	16	17	18	19	20	21	22		15	16	17	18	19	20	21
	23	24	25	26	27	28	29		22	23	24	25	26	27	28
	30		29	30	31

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